Studies in
Fiscal Federalism and State–local Finance

The Political Economy of Financing Scottish Government

Considering a New Constitutional Settlement for Scotland

C. Paul Hallwood
and **Ronald MacDonald**

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STUDIES IN FISCAL FEDERALISM AND STATE–LOCAL FINANCE

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Professor Hallwood dedicates this book to his wife Barbara and his three children, Sarah, Alexander and Philip.

Professor MacDonald dedicates this book to his wife Catriona, his father, Duncan, and the memory of his late mother, Effie.

Contents

Foreword Drew Scott viii
Preface xiii

1 Introduction 1
2 Searching for a politically and economically rational public funding model for Scotland 20
3 The economic case for fiscal devolution 37
4 Objectives of an effective fiscal federal system 51
5 Fiscal federalism: a Scottish perspective 59
6 The case for Scottish fiscal autonomy 70
7 A restatement of the case for Scottish fiscal autonomy 83
8 Fiscal devolution in some other countries 92
9 Empirical evidence: tax devolution and prosperity 103
10 A separate currency for Scotland? 117
11 Conclusion 122

Glossary 128
Bibliography 132
Index 143

Foreword

In the May 2007 elections to the Scottish Parliament the Scottish National Party (SNP) won the largest number of seats and formed Scotland's first nationalist government, albeit a minority one, since the launch of devolution in 1999. A key election pledge made by the SNP in the run-up to the election was to conduct a referendum on Scottish independence in the lifetime of the next parliament. And while the result of that referendum would have no *formal* bearing on Scotland's constitutional future, undeniably it will carry considerable political weight and, if won, will trigger an unprecedented debate over the future of Scotland in the Union.

In August 2007, and as a prelude to the independence referendum expected in 2010, the SNP Government launched a National Conversation designed to consult the Scottish people about their constitutional future. The options on the table ranged from maintaining the status quo, through an increase in the range of devolved competences, to outright independence. At that time it appeared that only the SNP was prepared to engage the Scottish people about their future constitutional preferences. The opposition parties – especially a Scottish Labour Party still reeling from the shock of electoral defeat – seemed unable to develop a coherent strategy to counter the rising popular appeal and apparent relevance of the new Government to the political mood in Scotland. However early in 2008, and doubtless in an attempt to reclaim the constitutional debate from the SNP, Wendy Alexander – Labour's then Scottish leader – called for the creation of an independent Commission to review the powers of the devolved government in Scotland some ten years after the initial devolution legislation had been drafted. With support from the other opposition parties, the Scottish Parliament established this Commission under the chairmanship of Sir Kenneth Calman. Its terms of reference were;

> To review the provisions of the Scotland Act 1998 in the light of experience and to recommend any changes to the present constitutional arrangements that would enable the Scottish Parliament to serve the people of Scotland better, improve the financial accountability of the Scottish Parliament, and continue to secure the position of Scotland within the United Kingdom.

Unsurprisingly the Calman Commission did not enjoy the support of the SNP Government which regarded it not only as unnecessary in the

context of the ongoing National Conversation, but as partial in remit because it excluded independence from the range of constitutional options on which it would take evidence. Indeed the terms of reference given to the Commission go farther than excluding independence by requiring the Commission only to reflect upon reforms that do not compromise the position of Scotland within the UK. The difficulties inherent in these terms of reference are fairly obvious. Two examples will suffice to illustrate the point. First, if one assumes that devolution itself was intended to secure Scotland's position in the UK by undermining the appeal of the SNP then clearly this strategy has failed. Accordingly by what criteria might the Commission gauge the extent to which a further devolution of policy competences would 'secure' – or otherwise – Scotland within the UK? Second, how are the trade-offs between, say, improving the financial accountability of the Scottish Parliament by further devolving fiscal responsibility to the Scottish Government to be set against the political implications fiscal decentralization *may* have at some point in the future for the constitutional integrity of the United Kingdom?

Self evidently the work of the Calman Commission is of the highest constitutional sensitivity at this juncture. Yet significant as this might be in political terms, at least some of the issues that the Commission is tackling lend themselves to a degree of objective economic analysis. This is particularly the case when seeking reforms that will increase the accountability of the Scottish Parliament for monies allocated, under the Scottish budget, for spending on devolved policies. As is well known, the current arrangements provided for little if any accountability in this regard. Devolved spending is financed through a block grant assigned by the UK Government to the Scottish Government. The annual amount of the block grant (currently around £30 billion) varies according to the Barnett Formula which links changes in the block grant to changes in spending allocations made to UK Government spending departments whose counterpart spending in Scotland has been devolved. If Whitehall departments' spending rises (falls) then so too does the block grant by an amount determined by Scotland's share of the UK population, currently fixed at 10.23 per cent. However it is entirely a matter for the Scottish Government and Parliament how the block grant is spent; there is no requirement that the pattern of spending on devolved policies in Scotland follows counterpart spending by Whitehall departments. It is this aspect of devolution that has attracted most criticism, at least from economists, because the separation of 'spending' from 'taxing' decisions means that there is no incentive for the Scottish Parliament to reduce public spending below the level of the block grant, even if so doing would be beneficial in economic terms (for example the 'crowding out' argument). Critics also argue that the system

whereby almost all tax revenues raised in Scotland are transferred directly to the UK Treasury provides little incentive for a Scottish Government to assign local expenditure in a way that maximizes economic growth in Scotland as it will not benefit from the (income, corporation, VAT) tax dividends that accrue.

It is this central issue of financial (non-)accountability and its consequences that form the primary focus of this volume. As is clear, Hallwood and MacDonald conclude that, *from an economic perspective*, only under a regime of full fiscal autonomy will the economic problems that result from an absence of financial accountability on the part of the Scottish Parliament as described above properly be resolved. If one wishes to locate the intellectual tradition within which this book sits then it would be what Wallace Oates has described as Second Generation Theories (SGT) of fiscal federalism (Oates, 2005). These SGT share an analytical approach in which the fiscal centralization versus decentralization debate is couched not only in the basic (allocation, distribution, stabilization) policy 'assignment' rules originally elaborated by Musgrave and which dominated the First Generation Theory (FGT) of fiscal federalism, but which now incorporate more recent contributions from public choice theories that stress the role of incentives on the *part* of decision makers (whose behaviour is part of the SGT research endeavour) and the impact of information asymmetries at different levels of government on the *processes* of decision making. It is fair to say that contributions within the SGT qualify many of the conclusions reached by scholars working within the FGT, not least in respect of the overall economic gains that can accrue as a result of fiscal decentralization that goes far beyond that advocated by the FGT. Indeed, a degree of decentralization that approximates to full fiscal autonomy on a subnational basis.

The importance of this book lies not only in the intellectual contribution the authors make to the SGT of fiscal federalism. Each chapter has a resonance closer to 'home' – that is in the work of the Calman Commission in Scotland. Many of the arguments contained here address precisely the dilemma of improving the financial accountability of the Scottish Parliament. It is therefore very surprising that none of the chapters compiled in this volume – many of which have already been published in other forms and are in the public domain – were cited by the Independent Expert Group of economists that the Calman Commission established to give advice on improving the financial accountability of the Scottish Parliament (the relevant papers are cited in, for example, Jeffrey and Scott (2007)). Explaining this omission is remarkably straightforward as it is directly addressed within the report of that Expert Group at para 6.3.11:

> A key consideration is whether a region with full fiscal autonomy, thus having different fiscal and economic policies as well as its own tax (and possible benefits) system, is to all intents and purposes, independent. If this is the case, full fiscal autonomy would not be compatible with continuance of the union that is the United Kingdom.

The problem with this explanation is that it constitutes a *political* judgement made by an independent group of economists rather than the conclusions reached by an *independent* expert group after a careful review of the economic analysis and evidence underpinning the case for (and against) 'full' fiscal autonomy. And while some of the pros and cons of fiscal autonomy are reviewed in subsequent paragraphs, this is done in a somewhat selective fashion which fails properly to reflect the considerable body of work within the relevant SGT of fiscal federalism. However what remains unexplained in the report of the independent group is why full fiscal autonomy is incompatible with UK union. Instead this is presented as a self-evident truth.

There are two further quibbles one can make with the conclusions reached by the independent expert group. The first relates to its comments on the situation in the Basque Autonomous Community where, under historic rules, the Basque government enjoys a situation that approaches full fiscal autonomy, yet the Basque Country remains part of Spain. As the report notes (para 6.3.4) reconciling fiscal autonomy with its constitutional position as an integral part of Spain is achieved by an economic agreement whereby fiscal policy in the Basque Country is coordinated with fiscal policy elsewhere in Spain including, of course, the fiscal policy of the Spanish government. Rather than establishing an argument against fiscal autonomy, the example of the Basque Country offers a clear case study of how a very high degree of fiscal autonomy on the part of a subnational government can exist within a unitary state. The second quibble refers to the rather confused discussion in the Expert Group report about the relevance of EU law to the fiscal arrangements within any single member state. Whilst it is true that EC state aid rules do have a bearing on infranational tax rules, the case law of the European Court of Justice clearly sets out three 'tests' of the autonomy of a subnational government such that, if met, permit the subnational government to enjoy discretion over its tax arrangements even where this creates a situation in which that tax regime differs from the regime prevailing elsewhere in the same member state.

There is, to my mind, a powerful economic case to be made for reforming the fiscal arrangements of the UK such that the Scottish Government and Parliament enjoy full fiscal autonomy. Of course this does not imply an absence of policy coordination between the devolved Scottish authorities and UK Government over the disposition of the various fiscal policy

instruments which the former regulates. The nature of the UK 'internal market' makes such coordination not only desirable from a social point of view, but essential from an economic one if economic welfare is to be maximized. An absence of policy coordination would simply mean that subsequent policy shifts would be required to offset the unanticipated external consequences of your initial fiscal policy decisions. But policy coordination of this type does not impose insuperable difficulties, particularly in the context of the policy gains that are identified as being on offer from a situation of full fiscal autonomy in the chapters contained in this volume.

Of course critics might continue to insist that full fiscal autonomy is not compatible with Scotland's continued membership of the United Kingdom. But such an assertion is not a matter for economists to dwell upon. It is one for politicians. The economic arguments revolve instead around what economic theory and evidence suggests being a fiscal policy arrangement that *best* delivers efficiency in the application of public spending and can maximize rates of economic growth. No arrangement will be without particular challenges, full fiscal autonomy included. And these challenges are fully addressed in the chapters that follow. However no informed discussion should proceed without all of the economic alternatives being fully debated and that is the clear risk in the debate that is underway in Scotland at the present time. The arguments rehearsed, and conclusions reached, in this book should play a central part in better informing that debate.

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Preface

We have argued for the last five years that the method of financing spending by the Holyrood government is seriously undermining not only the resilience of the UK as a political entity but also the efficiency of public spending in Scotland, Scotland's rate of economic growth and the strength of the private sector in Scotland. At present the financing method is a bloc grant handed down from Westminster to Holyrood. We note that while a good deal of political support has got behind ideas for tax devolution, much academic opinion remains of the view that the system is working quite well and only a little tinkering is required. Various, usually small, modifications to the present 'command and control' bloc grant system have been suggested. The 'command' element in it is that the Westminster government commands the size of the annual bloc grant, and the 'control' element is that tax devolution (outside of the small 'tartan tax' variance) is ruled out by law. Thus, there have been suggestions to cut the size of the bloc grant by about 10 per cent, or, to link its size to an inverse regional per capita 'gross domestic product' formula, or, a direct per capita social security spending formula, or, to set up 'targets' (equals more 'control') to somehow raise the efficiency of public spending in Scotland, or, to set up a non-partisan grants commission (equals a different 'command' vehicle) that will somehow achieve desired levels of efficiency in public spending.

In this book we set aside all of these suggestions for being, as we have said, just tinkering. Worse than this they will fail because Scotland has a credible threat to secede from the union and, as successive UK governments have recognized, could do so unless compensated with generous public funding. This is all the more so given the increased prominence of the Scottish National Party in government. What we strongly support is a quite different approach, one that would be seen as legitimate in the eyes of a significant fraction of the Scottish electorate.[1] In such a system decision makers, meaning the Scottish voters, their representatives – the Members of the Scottish Parliament, as well as the Scottish Government – take financial responsibility for their spending decisions. That is, they face a hard, or harder, budget constraint than under the present bloc grant system, or, any of the modifications that have been suggested for tinkering with the system. This financial responsibility can only be achieved by devolving responsibility over taxes to Scotland: what we henceforth call

'tax devolution'. There are of course degrees of tax devolution. One can argue that the 'tartan tax' is a small step in this direction. We have in mind greater degrees of tax devolution than this. Although we consider various forms of devolved fiscal systems in this book, we come down firmly in favour of fiscal autonomy in which essentially most if not all revenues raised in Scotland – including North Sea oil revenues – are returned to Scotland. Although this book is not about the economics of independence, which clearly has a much wider remit than the devolution of fiscal powers, we are now of a view that it may take much greater political independence to achieve the fiscal structure in Scotland which we believe is vital for Scotland and the efficient working of its parliament and economy.

Finally, it is worth pointing out that a recent judgment by the European Court of Justice[2] seems to have established the legality under EU law of tax devolution to Scotland. The ruling was that the Basque Country can have its own tax system as European competition law would not disqualify a region from cutting corporation and other taxes (possibly giving an unfair competitive advantage to firms in the region) if its legislatures already had sufficiently broad legislative competences. Moreover, it is the high court of the respective region that would decide on this latter matter. As Scotland already has its own Parliament, and had one for centuries prior to the Act of Union, it is hard to imagine that Scotland would not be seen as being 'sufficiently autonomous' to have its own tax system.

C. Paul Hallwood
Ronald MacDonald

NOTES

1. See the opinion poll data reported in Chapter 2.
2. Joined Cases C-428/06 to C-434/06, 11 September, 2008.

1. Introduction

Since the re-establishment of a Scottish parliament in 1999, there has been considerable debate regarding the issue of the devolution of taxes, and more general revenues, raised in Scotland to the Scottish Government. This debate, prominent in the Scottish media, is usually along political lines. The case for fiscal autonomy – in essence the devolution of all taxes – is often argued to be synonymous with full political independence for Scotland, while the argument against it is generally cast as inconsistent with the political union of the UK. In this book we try to move the debate about tax devolution away from the highly contentious discussion that links it with political independence towards an economic analysis of the case for it.[1] If we take it that Scotland remains in the UK, we can seek out arguments based on economic and public finance theory relating to tax devolution within the Union although these arguments, especially at the fiscal autonomy end, applies a fortiori if Scotland decides to become independent. In particular, we use the 'traditional' and 'new' fiscal federalism literatures, the optimum currency area literature, some game theory applied to Scotland's political context within the union, and we draw on time consistency issues from the macroeconomic literature to make the case for greater tax devolution to Scotland.

Tax devolution in the Union can run along a spectrum from the current Barnett formula status quo through 'fiscal federalism', and on to 'fiscal autonomy' with or without independence. By 'fiscal federalism' we mean the partial devolution to Scotland of policy-control over taxes: that is, choices over which taxes to raise, and the setting of tax rates and tax bases – with an emphasis on the assignment of taxes paid from Scotland into the UK's consolidated fund and apportioned back to the Holyrood government. By 'fiscal autonomy' we mean more complete devolution to Scotland of powers over these matters, with more emphasis on the setting of taxes than fiscal federalism and less emphasis on the assignment of taxes.

To many people these are arcane matters, but for Scotland not to secede from the Union they are matters that must be considered. Without increased tax powers for the Scottish parliament the UK with Scotland in it may not survive. We are aware that some unionists are of the opinion that greater tax devolution to Scotland is just another step on the way to

independence (although the establishment of the Calman Commission in 2008 suggests that is probably now a minority view even within the unionist camp) and, therefore, should be resisted. We think that the reverse is true – an argument that we spell out at length in Chapter 2. Thus, when it comes to public finances, what Scotland needs is a new and better system that will be viewed as acceptable, or, legitimate, by Scottish voters (in particular, the median voter in the terminology of political theory). The problem with all of the other reform ideas mentioned in the Preface (and referred to later in the book) is that if they came to pass they would all lack legitimacy and would not bring Scotland to a new political equilibrium. All they offer the Scottish voter is less public money from Westminster – something that is hardly likely to be welcomed, especially when oil prices are high.

While we argue that public funding reform in the form of tax devolution is likely to be seen as legitimate, we also argue that it has the best economic efficiency properties. Tax devolution has the great advantage of making those at Holyrood who spend taxes also bear the political cost of raising those taxes – a vital characteristic required for economic efficiency that none of the other reform proposals offer. It also has important efficiency implications for the private sector which we also discuss at some length in this book.

Thinking about the legitimacy issue, one can ask where on the spectrum from the status quo, through various degrees of fiscal federalism, and on to fiscal autonomy, with or without independence from the UK, does legitimacy begin? Anybody worried about the survival of the UK with Scotland in it, but wanting to keep the UK as nearly a unitary state as it now is, would want to find this point on the spectrum. We don't know for sure where it is, and we don't take a view on the validity of finding such a position, but we are convinced that it is not at the end of the spectrum where Scotland currently finds itself – with the barest minimum of tax devolution. Most surely, the fact that in 2009 the SNP forms the Scottish Government bears this out.

So what we will do in much of the rest of this book is to lay out the economics and some of the politics involved in the main bands on the spectrum from Barnett (the current funding system) through fiscal federalism, to fiscal autonomy, both with and without independence.

A 'little' fiscal devolution could mean that only a limited range of policy control over taxes is devolved; say, control over rates of income tax between narrow limits – which, indeed, is allowed for under the Scotland Act. A greater degree of fiscal devolution could mean that control over a greater range of taxes is devolved, say, unrestrained control over income tax rates and income tax base, as well as Holyrood's control, partial or

complete, over a range of other taxes, such as fuel duty, stamp duty and betting tax.

A SPECTRUM OF TAX DEVOLUTION SYSTEMS

Here we outline the current funding system for Scotland and then we will briefly describe the fiscal federalist and fiscal autonomy alternatives to it that are the subject matter of the rest of this book.

Bloc Grant

The current bloc grant funding arrangements for Scotland: the Barnett formula

UK government policy towards financing the devolved administrations of Scotland, Wales and Northern Ireland was stated by HM Treasury in March 1999 as follows:[2]

1. All UK tax revenues are collected into the UK Consolidated Fund (excepting, that is, any taxes collected under the Scottish variable tax rate which would be Edinburgh's own funds).
2. Decisions on the allocation of pubic spending between the four member countries of the UK rest with the Westminster Parliament.
3. Change in the sizes of the budgets of the devolved governments is governed by the Barnett formula – see below.
4. The devolved administrations are responsible for allocating public expenditures between areas of public spending that is devolved to them. This spending includes that for operational and capital costs. Taking the Scottish case, in Figure 1.1 public spending in Scotland includes both central and local government. This breaks down into three parts: 'identifiable' (as providing services in Scotland), 'non-identifiable' (spending in Scotland that benefits the UK as a whole), and 'other' – such as general debt interest. Then identifiable government spending in Scotland is further broken down – that part directed by the Scottish Government, the other by other government departments in Scotland. Finally, Scottish Government spending breaks down into the total assigned budget under the control of the Scottish Parliament, and the non-assigned budget (such as money raised through the non-domestic rates) which is also under the control of the Scottish Parliament.
5. The UK government retains the right to reduce bloc grants to the three regions if self-financed expenditure grows more quickly than in

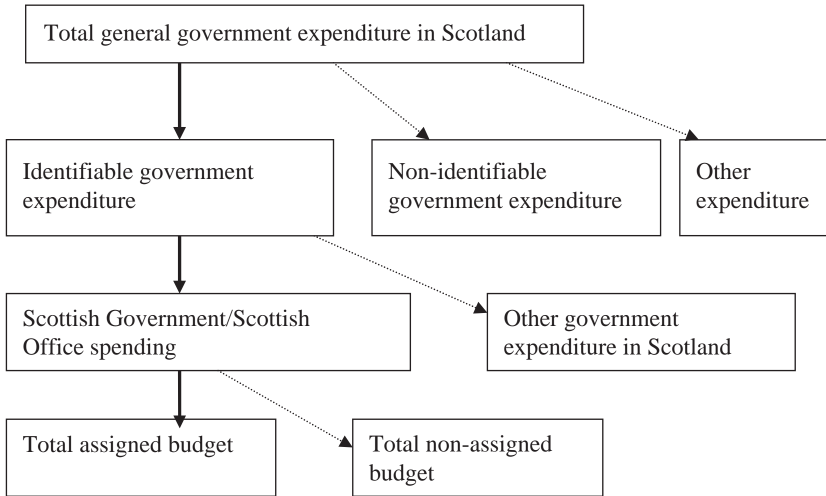

Figure 1.1 Classes of government spending in Scotland

England and threatens UK public expenditure targets. This does not apply to expenditures in Scotland financed by the Scottish variable rate of income tax.

6. Across the board reductions in spending by the devolved governments can be made by the UK government as a matter of UK government policy – that is simultaneously applied to the four member countries.
7. If spending decisions in a devolved administration has a knock-on cost for some other UK department or agency the devolved administration shall pay that cost.

Barnett formula

The Scottish Parliament Information Centre (2000) defines the Barnett formula as follows:

> The [Barnett] formula is designed to automatically apply a proportionate share of any increase (or decrease) in comparable English spending programmes to Scotland. It was introduced in 1978 and has assisted in determining government expenditure in the non-English territories. . . . [Thus], there are essentially two main components to Scottish public expenditure: The inherited expenditure base (including new functions since devolution). Incremental expenditure changes (*this* is the part determined by Barnett).

It follows therefore the Barnett formula governs the size of *increases* in the Scottish budget. The size of the Scottish budget in 1978 set the absolute

level of the Scottish budget to which the annual Barnett increases have been applied. Once public money is allocated the Scottish parliament is free to determine its allocation between the devolved spending departments.

Administrative advantages of the Barnett formula

But why have a 'Barnett formula' at all? Historically, from 1888 to 1957 public spending in Scotland was largely governed by the 'Goschen formula' – introduced by G.J. Goshen when he was Chancellor of the Exchequer. Funding was in the proportions 80:11:9 respectively to England, Scotland and Wales. However, from 1958 until the introduction of the Barnett formula by Joel Barnett when Chief Secretary to the Treasury in 1978, funding of public spending in Scotland was a matter of political in-fighting and compromise – as it continues to be between UK spending departments. Administrative convenience largely explains the re-introduction of a formula-based system to replace a system of haggling in the political market place. Thus, Twigger (1998) listed three advantages of the Barnett formula: it protected public spending per head in Scotland above the English average; the Scottish Executive was freed from having to negotiate with the UK Treasury; and Scotland was left free to allocate public money channelled to it as it saw fit, at least within and between the devolved spending departments. Of course, the introduction of the Barnett formula was itself a political decision, one that was made acceptable to Scotland by the first of its listed advantages. Indeed, Midwinter (1999, p. 87) has argued that 'the objective of the approach . . . [was] to prevent further Scottish gains through bargaining'. Such gains may well have been made given that toward the end of the 1970s the Scottish Nationalists, claiming that it was 'Scotland's oil', were riding high in the opinion polls, and could have been used as a side-threat by the Scottish Office to extract even larger transfers of public funds to Scotland. This said, according to the 'needs assessment' exercise undertaken in 1979 by HM Treasury, on the basis of greater needs in various areas of public spending[3] – due for example to poorer health in Scotland, public spending per head of 116 per cent of the English level was said to be justified.

Even so, early thinking on the Barnett formula pointed to a disadvantage for Scotland. First, contrary to Twigger (1998), there was fear of a Barnett 'squeeze' as public spending per head in Scotland converged toward the UK average. Thus, Kay (1998, p. 33) argued that 'Scottish public spending increases more slowly relative to England and Wales over time, and is more quickly overtaken by inflation. In real terms, Scottish levels of public expenditure per head of population will be pulled inexorably towards convergence with the levels set down south'. In fact, the so called Barnett 'squeeze' is mostly marked by its absence. As Heald pointed

out as early as 1994 a potential squeeze has been offset by adjustment in the populations ratios – with Scotland's share of the UK population being adjusted downward but not as quickly as its actual population; and by something called 'formula bypass' which has moved money to Scotland outside of the Barnett formula.

Fiscal Federalism

The term 'fiscal federalism' is usually applied in Federal states such as the United States and Australia, where sub-central government has Constitutional rights over devolved taxes that cannot be simply revoked by the Federal (central) government without a change in the Constitution. For example, the United States Constitution reserves certain rights to the States and a Constitutional Amendment would be needed to change those rights – the making of a Constitutional Amendment itself being a complicated process that involves decision makers other than the Federal government itself. The UK, however, is a unitary state in which powers granted to lower tiers of government are at the wish of central government (Westminster), and are not protected by a written Constitution: a simple majority vote in the Westminster parliament would be sufficient to revoke the taxation powers (if any) of a sub-central government – such as that defined in the Scotland Act. Even though the UK is a unitary state, we will use the term 'fiscal federalism' in a UK context.

Fiscal Autonomy

We will also discuss the case of 'fiscal autonomy with independence' – full fiscal autonomy – and we will show that in fiscal matters there are some important differences with the case of 'fiscal autonomy within the UK'. For example, under the latter arrangement Scotland could be required to pay for public goods – such as national defence – provided by Westminster; while with independence this and other public goods would have to be provided directly though the Scottish parliament, not indirectly through Westminster and Scotland would have control over VAT rates something precluded by remaining in the Union.

Equity, Efficiency and Stabilization

In this book we address the issue of the devolution of tax, or more generally revenue, powers from the perspective of the economics literature. There are other approaches, such as a political science approach, that can be brought to bear on the issues of tax devolution. We venture into this

territory in Chapter 2 where we discuss Scotland's (or, rather, Scotland's median voter's) threat to vote for secession, and how fiscal autonomy could head this off. The economic framework highlights three key elements in the design of a fiscal system: *efficiency, equity* and *macroeconomic stabilization*.

Efficiency

Efficiency relates to how the fiscal system is designed to ensure that government expenditure is allocated efficiently and incentives to the public and private sector agents are not blunted. In terms of the public sector, this boils down to the issue of accountability: are the politicians accountable to the electorate for their spending decisions, both in terms of the overall spending figure and also the way in which the budget is allocated amongst different spending categories? In terms of the private sector, can the fiscal system be used to counter or modify evident distortions, or, in more colloquial terms, to ensure that winning companies in the private sector maintain a competitive advantage? Efficiency has both a static and dynamic aspect for both the public and private sectors. The static aspect is to find the right balance between the different areas of public spending, and between the relative sizes of the public and private sectors in Scotland. The dynamic aspect is to design a fiscal system that is less burdensome on the private sector so that it promotes economic growth in Scotland and the rest of the UK.

Equity

However, the exclusive focus on efficiency could be to the detriment of the equity function of fiscal design – that households in Scotland should have a comparable provision of public services to households in the rest of the UK (it need not be to the detriment depending on the size of the putative fiscal position post independence or in the presence of fiscal autonomy and on the preferences of the politicians). Inevitably, and in practice, there is a trade-off between efficiency and equity. However, we note – and this is one of the key themes of this book – that the current fiscal settlement for Scotland focuses almost exclusively on the equity function of fiscal policy to the detriment of the efficiency function.

Macroeconomic stabilization

The macroeconomic stabilization role relates to the inbuilt insurance function of a tax system: if income falls in Scotland relative to the rest of the UK, are there mechanisms in place which automatically compensate Scottish households for this fall? In the current system there are – for example, with a fall in income the tax-take falls and social security

payments are likely to rise. Although the stabilization role is often ignored in discussions of the devolution of fiscal powers it seems to us important to consider it, particularly when considering the more radical proposals for fiscal autonomy and full fiscal autonomy, since they involve the devolution of oil revenues to Holyrood, thereby opening up the important possibility of asymmetric shocks between Scotland and the rest of the UK (that is, how correlated is the intra-UK business cycle?).

Overall

This book is about judging how various proposals for a fiscal settlement for Scotland fare against the criterion of legitimacy as well as the three key economic elements in the design of a fiscal system and, specifically, given legitimacy how to find an appropriate mix of the three key economic roles of fiscal policy within a given fiscal system, namely:

- the allocation, or efficiency, role;
- the equity, or income equality, function;
- and the macroeconomic stabilization role.

Trade-offs

In designing a fiscal system there is inevitably a trade-off between these three functions. And the different systems discussed in this book involve different trade-offs of these functions. What we are looking for is a fiscal system for Scotland which provides the best trade-off between these three functions while being accepted as legitimate by the Scottish voter.

Static efficiency

Static efficiency in the public spending aspect, as we have seen, is not the only aspect of efficiency which a fiscally devolved tax system can address, but it is the one on which the media most often focuses and we pursue it here in a little more detail (the other efficiency aspects are considered in greater length later in the book). The following quote from a leading textbook on public finance nicely illustrates the efficiency argument:

> Our task . . . is to extend the economic principle of efficient resource use to the public sector. Some believe this to be a hopeless task and hold that the determination of budget policy is a matter of politics only, not amenable to economic analysis, a view that is unduly pessimistic. Budget policy has a difficult task and will hardly realize a perfect solution. But not all feasible policies are equally good. Efficiency of resource use, here as in the private sector, is a matter of degree, and economic analysis can help us in seeking the best answer. The task is to design a mechanism for the provision of social goods which operating in a democratic setting will be as efficient as feasible. (Musgrave and Musgrave, 1989, p. 41)

The present Barnett bloc grant system leaves Holyrood the choice, within any administrative constraints set by Westminster, of how to spend the grant across the spectrum of public goods supplied by government. The whole of the grant is spent, or nearly so, as there is little or no obvious benefit to Scotland of returning an unspent portion to Westminster. This system gives the Scottish Government and Parliament little incentive to choose the right balance – as they would if they had to think about it, between the supply of private goods and the supply of public goods in Scotland. That is, to get the relative size of the private sector in Scotland right. Indeed, MacKay and Bell (2006) calculate that about one-tenth of the Scottish budget is wasted money – and that is a calculation based mainly on the fact that Scotland's population is shrinking while the size of the Barnett bloc grant is not. Had they been able to do more detailed analysis of labour productivity in the Scottish public sector (which in some sectors they find is lower than in comparable sectors in England), then the percentage of wasteful spending would most probably be higher than their rough estimate. This is surely a matter of importance. Some in Scotland argue that the public sector is too large and stultifies private enterprise. (Others would argue for a larger public sector, something that we think is not credible.) However, the present public sector funding system in Scotland largely makes this important debate moot. What would be the point of having such a debate when Westminster under the rigid Barnett formula largely sets Scottish public spending?

Under the present bloc grant system there is little connection between spending decisions taken by the Scottish Government and Parliament and decisions on how and from whom to raise the necessary revenues. Pressure for more government spending in Scotland can always blame Westminster and the Barnett formula for squeezing Scottish public funds. Thinking about government spending in Scotland would change dramatically if the Scottish polity had also to consider the revenue side of its political calculus. We argue that the main problem with financing public spending by Edinburgh – governed as it is by the Barnett formula, to put it politely, is that it is almost entirely concerned with equity – or horizontal balance – in the UK, to the detriment of efficiency.[4] Or, to put it impolitely, the size of the bloc grant is influenced by concern for buying off the Scottish electorate to remain in the Union – see Chapter 2. After all, the Barnett formula was devised in the 1970s, at a time when the Scottish National Party was riding high in the opinion polls, and the idea that it is 'Scotland's oil' was indeed influential in Scotland and it is now widely accepted that Scotland could have been very wealthy indeed if North Sea oil had been put to good use and its proceeds invested in an oil fund rather than the revenue generated being spent as it was pumped out of the ground, which is short sighted.

Introducing a harder budget constraint than exists at present could have beneficial advantages for Scotland. First, and most simply, improved alignment of decision making by the government with the preferences of the electorate should improve the use of financial resources – this represents a static improvement in efficiency. Second, Holyrood does not at present have strong incentives to use tax revenues to raise economic growth in Scotland because increased tax revenue from a faster-growing tax base would be paid to Westminster and *not* channelled back to Holyrood – an improved growth performance would represent a dynamic improvement in efficiency. The present incentives for greater efficiency in public spending – that is, cutting the costs and raising the productivity of public services such as health and education – are also probably deficient (although, of course, there are other ways in which public sector efficiency could be improved – see Crafts, 2004).[5] While it is true that under the bloc grant, cost saving in one area of public spending can be used for greater spending in another, it is broadly true that cost savings will not show up as lower taxes. There is of course the 'tartan tax' that could indeed be cut to reflect lower expenditure needs, but the amount of variability is not great. Under a fiscal federalist tax devolution arrangement greater variability in the tartan tax, from ±3 per cent to, say, ±7 per cent would be desirable. Moreover, with fiscal autonomy limitations on income tax variability could be done away with. The Scottish parliament would then have full responsibility for income taxation in Scotland – just as is the case with parliaments in other countries.

Brief Outline of a Fiscal Federal System

Although we will be dealing with different variants of tax devolution in the following chapters, we give a flavour here of what we mean by a fiscal federal tax system, which is, perhaps, one of the most popular alternatives, especially for unionist parties, to the current Barnett arrangements (see, for example, the Steel Commission Report) although it is not our preferred system. For a federal tax system to function effectively it should address the following key issues:

- how to assign expenditure responsibilities between the respective levels of government;
- define how those expenditures are financed in terms of tax and revenue raising by the different levels of government;
- specify the nature of intergovernmental transfers;
- address the ability of sub-national governments to borrow.

The first of these issues was initially defined with the establishment of the Scottish parliament and this represents a significant step towards fiscal devolution. However, the other issues have not so far been properly addressed in a Scottish context. At present, the Scottish Government has the power to change personal income taxes by plus or minus three pence in the pound, the so-called tartan tax, and to set and raise non-domestic rates – the proceeds of which accrue to local government – in addition to setting a range of user charges such as the student tuition fees. However, as has been widely noted, the ultimate effect of this in terms of its revenue raising powers is likely to be limited**,** as are its effect on incentives. This follows because any cut in taxes would result in the expenditure equivalent amount being clawed back by Westminster and with no ability to borrow on capital markets, spending may have to be decreased as tax rates fall (depending on whether the bloc grant revenue was above, below or equal to the total annual spend of the parliament)[6] and of course any improved growth performance resulting from the tax cut would also not accrue to the Scottish government.

Vertical imbalance

The phenomenon of central government having greater ability to obtain income through taxes that it levies than it actually needs for the exercise of its authority, while the sub-central level has less power to raise income than it needs, is referred to in the fiscal federalism literature as 'vertical imbalance' or 'fiscal mismatch'. Really, an imbalance should be resolved if the sub-central level of government is to exercise its authority with an eye on the efficiency of its spending decisions. By 'efficiency' we mean finding a balance between the provision of publicly provided and privately provided goods that the electorate and tax payers support, as well as cost efficiency in the provision of those public goods. One of the anomalies in the current UK system is that this vertical imbalance has been partially resolved[7] for the lowest tier of government – local authorities – who can tax, spend and borrow, but not for the Scottish parliament.

Horizontal balance

However, an exclusive focus on vertical imbalances could result in '*horizontal imbalance*', in terms of transfers from the centre being inappropriate to deal with the *principle of equalization* of resources based on needs at the regional or local level. Needs equalization exists in all federal systems that we know of. The question is the extent to which this equalization occurs. In all real world cases intergovernmental grants from central to sub-central government range from a low of 22 per cent in the Canadian Provinces to approximately to 80 per cent in Scotland. In a federal system

of tax devolution, some equalization is inevitable to finance common services. This equalization mechanism may be directed to a specific service, such as health, education or social security – or, as in the case of Scotland, through the overall bloc grant.

Trading off efficiency and equity

In essence, and assuming that Scotland remains within the UK, the challenge facing Scotland is to find the most satisfactory trade-off between equity and efficiency objectives. Achieving this will require improving the vertical and horizontal balance on the revenue side. Scotland's current financing system is characterized by a high level of equity equalization and a high level of vertical imbalance. Hence the choice is: how much horizontal balance and, therefore, needs equalization with the rest of the UK, is Scotland willing to give up in exchange for more self-financing and so a reduction in vertical imbalance?

As we have seen, at the moment, the allocation of additional revenues to Scotland is based on an unconditional grant – the *Barnett formula.* This formula is regarded by many as favouring Scotland since it delivers a higher per capita level of revenue to Scotland than to most other regions of the UK (with the exception of Northern Ireland). The argument that Scotland requires higher per capita spending relative to the rest of the UK is based on the perceived greater needs in Scotland due, for example, to its poorer health record and the sparsity of its population. However, the argument that Barnett favours Scotland ignores the missing revenue from North Sea oil – a factor which would have had a very significant impact on the Scottish economy, especially in the 1970s and throughout the 1980s,[8] had the oil revenues been used for the advantages of the Scottish people since its discovery – and that point has been made forcibly in the McCrone (1975) memo; a document which was kept a secret from the general public because it claimed North Sea oil would make Scotland a very wealthy country and England would be transformed into a 'basket case' economy if Scotland had been able to make good use of the oil revenues such as other countries and regions in the world have been able to do. We return to this point later in the book.

Indeed, much play is made in the general literature on fiscal federalism about the equalization, or equity, function of a vertical imbalance. In other words, in the interests of equity between regions the central government should distribute more spending per head on things such as health, education and social services to poorer regions than to richer regions. This argument is well and good, but its relevance to Scotland and the UK is questionable. The simple fact is that public spending on devolved services such as these across UK regions pays virtually no attention to the issue of

interregional equity. Thus, using data in McLean and McMillan (2002, table 1), the correlation across the 12 regions of the UK between regional GDP per head and regional public spending on devolved services per head (using 1999–2000 data) is –0.16. In other words, variation in regional income/head explains almost none of the variation in regional per capita public spending.

Our point about the 'vertical imbalance to promote inter-regional equity' argument is that it should not be used now by others in an effort to head off greater devolution of direct fiscal powers to Holyrood – simply because this is not how interregional fiscal spending in the UK actually works.

There are two other points concerning Scotland's current perceived favourable standing in the Westminster public spending per head allocation game. First, as the 'Barnett squeeze' is set anyway to reduce Scotland's favourable position, Holyrood might as well make the most of it and ask for more devolved fiscal powers even if it does mean something of a less favourable position in the public spending game (although this is not clear given the uncertainty surrounding the Scottish budgetary position).

A payday for Westminster

Secondly, it might by now have come to the notice of some that the issue of devolved fiscal policy is not one so much of persuading Holyrood of its merits as one of persuading Westminster. To give the UK Treasury something – over time, lower public spending per head in Scotland – in return for handing more fiscal powers over to Holyrood might look like a good bargain. In simple terms the deal is: Holyrood will stop bleating about the Barnett squeeze in exchange for Westminster devolving more fiscal powers and some of the revenues from oil that Westminster has persistently used short sightedly over the years.

A related point is that Scotland is receiving such large fiscal transfers from Westminster that it is at least implicitly being recognized that it is indeed 'Scotland's oil'. An implication of this is that an independent Scotland, or Scotland within the Union with access to North Sea oil revenues, while being able to tax directly North Sea oil revenues, would face a volatile oil price which could be dealt with through an oil fund, much as occurs in Norway, Alberta and Alaska. Such a fund could in all probability allow Scotland to enjoy public spending which is at least as favourable as the current Barnett-driven settlement, and of course spending from the income accruing from an asset makes much more economic sense than spending the asset itself which is simply bad economics and what has been effectively happening since the discovery of North Sea oil.

Moving to a fiscal federalist structure in Scotland (that is, Scotland in the United Kingdom) would mean moving the efficiency–equity trade-off

in the opposite direction: sacrificing some equity in favour of potentially greater efficiency. Moving even further along the spectrum to fiscal autonomy would mean sacrificing even more equity for even greater efficiency. This could produce fluctuations in income categories that would not have occurred under the current system. However, it could produce an improved allocation of resources in the longer run and the opportunity potentially to incentivize growth and ultimately generate additional revenues for spending functions.

Two points should be noted. First, superior allocative efficiency on the spending side, or on the matching of costs and benefits across expenditure categories, is not inevitable, and second, a reduction in horizontal balance is likely to reduce resources in the short term. On the first of these points, increased efficiency depends largely on how Scottish politicians react in the new revenue and tax environment; and they are more likely to respond positively the greater is transparency and accountability in the system.

As to fiscal autonomy, where tax transfers between Scotland and Westminster largely or completely cease, and could be reversed to pay for public goods supplied to Scotland by Westminster, the incentivizing effects would be further increased, while equity within the union issues would potentially be set aside. The financing of public spending in Scotland would be a matter for the Scottish Government and Parliament. This is, of course, the case for independent countries – except to the extent within the European Union that inter-regional transfers take place under EU law to support low income areas. Whether Scotland wants to go down the route to independence is, of course, highly contentious, and the politics of this is something that we do not address although we do discuss the political economy of achieving the kind of fiscal autonomy we favour without more political independence in Chapters 6 and 7.

There are other arguments for fiscal federalism in Scotland which, although related to the economic argument, are more to do with democratic, or political, accountability. We note two such arguments. David Heald (1990) eloquently expressed one aspect of the democratic accountability view:

> Such an arrangement [a fiscal federalist arrangement] is essential for the constitutional accountability of a Parliament which would possess extensive legislative responsibilities and expenditure programmes. Moreover, there would be much stronger incentives to fiscal responsibility under a financial arrangement whereby a Scottish Executive must justify to a Scottish Parliament, electors and taxpayers, its chosen trade-off between services and taxes.

The last sentence of this argument is of course similar in spirit to our economic analysis of fiscal federalism.

A second argument in this vein relates to the constitutional settlement in the UK and, in particular, the possibility of a political party of one colour being in office in Westminster and a different party in Holyrood, which of course is currently the position in the UK, although for the first eight years following the establishment of the parliament the same party held sway in both Holyrood and Westminster. Since under the current settlement, funding for the Scottish parliament is essentially at the behest of the political party in office at Westminster, a constitutional crisis could arise if there was disagreement between the two parties over the bloc grant allocation. To avoid such a potential conflict the Edinburgh parliament should have appropriate tax and spending powers to minimize the scope for unilateral rewriting of the financial dimensions of the settlement.

OUTLINE OF THE CHAPTERS

Anybody wearying of the more theoretical and policy-related discussion of tax devolution might well refresh themselves by jumping ahead to Chapter 9 which discusses 'Empirical evidence: tax devolution and prosperity'. There we examine the empirical evidence on the economic effectiveness of tax devolution as experienced in many countries around the world. Some people have responded to our arguments set out in earlier publications saying that there is 'no' empirical evidence supporting them. In fact, this is a mis-reading of what empirical evidence was available even six or seven years ago. Today it is fair to say that the claims that we make for the economic effectiveness of tax devolution does receive some support from the empirical evidence, namely that tax devolution promotes investment, cuts government spending and to some degree, raises the rate of economic growth.

Returning to the thread of this book, in Chapter 2 we argue that what some view as overly-generous funding of the Scottish parliament results from Scotland's credible threat to secede from the Union. Using some basic game theory, we argue that high public spending in Scotland is due to Scotland choosing second in what amounts to a non-cooperative sequential game. That is, for as much as a century, Westminster decides how much money to allocate to Scotland, and Scotland then chooses between accepting the offer or seceding from the Union. As Westminster governments have not wanted Scotland to secede, over this long period of time, they have always made an offer so large that Scotland would not refuse it. Using this analysis we dismiss the various reform proposals mentioned earlier for not recognizing that reform of Scottish government finances must be consistent with Scotland's credible threat to secede from

the Union. Although, of course, as those who have lived in Scotland through the key referenda on devolution for Scotland and, more generally, at times when the SNP threat was very real in Westminster elections, will realize, the credible threat we refer to has been greatly blunted by the false threats from both key elements in the business sector and unionist politicians on the implications of Scottish secession. Also, in Chapter 2, fiscal autonomy is demonstrated to be a viable reform within the existing political context and, in likely circumstances, could remove Scotland's second mover advantage. We also use a cooperative bargaining game model to demonstrate that an Australian style grants commission – an idea that is being pushed in some quarters, would not be a viable reform in the British context.

In Chapter 3, on the economic advantages of fiscal devolution, we flesh out the economic theory of fiscal federalism that supports the case for greater (vertical) balance between Scottish public spending and the financing of this spending. The thrust of this body of theory – which comes in two flavours, 'traditional' and 'new', is that decision makers (the Scottish electorate and its agents the Scottish Executive and Parliament) will make more efficient decisions concerning the use of public money if they have to face the full opportunity costs involved. This means that public spending by Holyrood needs to be more closely aligned with taxes raised in Scotland, and less reliant on a bloc grant from Westminster. If so, the true tax burden of public spending will become more apparent, and decision making should be better informed. In this chapter we support the idea of 'competitive' federalism – as opposed to 'cooperative' federalism. The main problem with the latter is that fiscal jurisdictions, in harmonizing their tax rates and other features of their tax systems, do not allow competition between these jurisdictions, and nor do they allow 'a thousand flowers to bloom' seeking superior fiscal arrangements. Indeed, on the European Union level the British position has been consistently against tax harmonization between the members, and the advantages of tax competition are often cited in support of this position (this being one of the key criteria for judging if the UK should relinquish the pound sterling and join the euro). It is somewhat inconsistent therefore that until recently the Westminster government has been against fiscal competition within the UK, but not between the UK on its European partners.

We emphasize in Chapter 3, that fiscal federal systems that retain a significant bloc grant element can contain residual inefficiencies. One problem is that of 'moral hazard' which arises if a sub-central government operates in the expectation that fiscal mismanagement will be bailed out by central government. Moreover, we argue that it may be difficult to get around moral hazard because it may be difficult for central government to

credibly commit not to bail out a sub-central government facing a fiscal crisis – this is the so-called 'time inconsistency' problem. It is problems such as these with fiscal federalism that lead us on in later chapters to assess the case for fiscal autonomy.

Finally, Chapter 3 also contains an overview of the recent literature on social capital and fiscal federalism. The key argument is that decentralized fiscal policy, by bringing government closer to the people, can be a key element in strengthening social capital. To quote one specialist in this field, social capital is 'the trust, norms and social networks that foster mutually beneficial cooperation in society'. The basic idea is if more fiscal responsibility is given to people the more economically and socially responsible they will become. The benefits of this are many, and we emphasize that there will be a tendency for efficiency in public policy to increase. In turn, this will improve economic growth and welfare in the long term. Supporting evidence for this is reported.

Possible devolution of tax powers to Scotland under fiscal federalism is outlined in Chapter 4. Our discussion here is informed by our thinking on tax assignment as well as our marginal tax rule. Under fiscal federalism, a lesser degree of tax devolution than fiscal autonomy, we argue that greater efficiency in public finance, especially in inducing a non-distorted balance between the respective sizes of the public and private sectors, can be induced by tax assignment. Thus, even if control over some tax rates and tax bases is not devolved to Scotland, assigning tax revenues raised in Scotland (and paid into the Westminster consolidated fund) back to Holyrood provides incentives in Scotland to grow the Scottish economy and tax base. These incentives are entirely missing in the extant bloc grant system as the size of the bloc grant is virtually invariant with respect to the size of the Scottish tax base. Our marginal tax rule also has efficiency properties for Scottish public finances. The idea is that extra public spending on some given project in Scotland has to be matched with higher tax revenues (or reduced public spending on other things). Such a system forces politicians to think about the respective marginal benefit of extra public spending (on the new project) and its marginal cost measured in terms of reduced private spending or reduced public spending on other pubic sector projects.

In Chapter 5 we consider the present fiscal arrangements in Scotland and sketch out how fiscal federalism might look based on the various economic criteria discussed in earlier chapters. We argue that 'tax assignment' (Scotland retaining a portion of taxes raised in the country rather than sending them directly to the consolidated fund) would force decision makers to consider carefully their spending decisions 'at the margin'. This is our marginal tax rule.

In Chapter 6 attention turns to an examination of fiscal autonomy in Scotland. This is the case where most public spending in Scotland is financed only by taxes raised in Scotland, and may be supplemented by borrowing by a Scottish Treasury. In this chapter we argue that fiscal autonomy creates the 'cleanest', most rigorous, incentives for efficiency in the level and allocation of public spending in Scotland.

Chapter 7 further develops the themes introduced in Chapter 6 on fiscal autonomy. One of our main concerns in this chapter is to compare fiscal autonomy with the status quo, Barnett bloc grant formula, that some authorities continue to argue is best for Scotland. We very much disagree.

Chapter 8 presents our first consideration of the main features of devolved fiscal arrangements in several other countries besides the UK. The main point emphasized is that the UK stands out as the country with the least devolution of powers over regional taxation – that is, the UK has the most extreme degree of vertical imbalance. We think that the UK has a lot to learn from these other countries, and that it should join in with the international learning process that is now going on between countries. Our discussion of fiscal devolution to the Basque Country in Spain is meant to highlight that extensive devolution has already occurred in Europe and that the UK–Scotland would not be the first to move significantly toward fiscal autonomy.

As mentioned earlier, Chapter 9 presents the empirical evidence supporting the case for tax devolution.

Chapter 10 discusses whether an independent Scotland would be better off with its own currency, or, to be a part of a monetary union, either continuing with the pound sterling or adopting the euro. Our view is that Scotland is too small to justify having its own currency. This leaves an effective choice between the pound and the euro. Our view is that a transition from one to the other would be difficult.

Finally, Chapter 11 concludes with a summary of our case for fiscal autonomy along with a word of warning that any fiscal reform that increases the degree of responsibility at sub-central tiers of government will not work well unless the electorate knows what it is getting into and elects politicians that are prepared to work wholeheartedly with the new system.

NOTES

1. Previous work focusing on the economics of fiscal federalism for Scotland include Bell and Christie (2002), Darby et al. (2002), Hallwood and MacDonald (2004), MacDonald and Hallwood (2006) and Steel Commission (2005).

2. For this listing see Scottish Parliament Information Centre (1999).
3. The areas are health and social services (Scottish spending justified on the basis of needs at 107 per cent of the English level), education and libraries (107 per cent), housing (130 per cent), other environmental (133 per cent), roads and transport (144 per cent), and law and order etc. – excluding police (108 per cent).
4. Nor is it achieving its declared objective of equalizing Scottish per capita public spending with the rest of the UK; and there is concern in Scottish political circles that funds from other sources, such as Objective One money from the European Union, are not the net additions to the Scottish budget as they are intended to be.
5. See *The Economist*, 9 April 2004, for a discussion of this issue.
6. We note that in certain periods of the Labour administration the government underspent its bloc grant allocation to the tune of £135 million – £623 million.
7. It has not been fully resolved since 80 per cent of local government revenues are in the form of a direct grant from the Scottish Parliament. Council tax, which is under control of the local authority only contributes 20 per cent of revenues and non-domestic rate income is harmonized and pooled centrally and redistributed in the bloc grant.
8. For data on Scotland's budget balance including oil revenues see *The Economist*, 'History repeats itself', 26 June 2008.

2. Searching for a politically and economically rational public funding model for Scotland

In this chapter, we discuss some analytics of the political realities in which the allocation of public money from Westminster to Scotland came to operate, and we will use our analytical model to compare various reform proposals. We will offer explanations for why Scotland enjoys public spending per head – of course, much of it financed by a bloc grant from Westminster to the Scottish parliament – well above what it should receive on most of the standard objective criteria, such as its per capita gross domestic product relative to other regions in the UK, or social 'needs' (as was calculated by the Westminster government in 1979, and more recently by various formula suggested in the academic literature), although not perhaps if one factors in the North Sea oil dividend, which we return to later. It should be noted that people in the Rest of the UK have noticed the current distribution of per capita spend within the UK and have come to think of the present system as 'very unfair'. Thus, Lord Barnett (the inventor of the formula bearing his name that largely governs changes in the size of Scotland's bloc grant): 'The problem is the formula is based on spending per head, rather than need. The differences in spending now are deeply unfair and unacceptable. It needs to be changed'.[1] Others have argued that being awash in public money is bad for the Scottish economy and would like to see a reduction in Scotland's bloc grant for the good of Scotland.[2]

We have argued elsewhere (Hallwood and MacDonald, 2004, 2005, 2006a and 2006b; and MacDonald and Hallwood, 2006) that receipt of public money in the form of a bloc grant by Holyrood is bad for the efficiency of public spending in Scotland because the Scottish parliament and government do not have to be concerned with efficiency in public finance. In standard economic theory a prerequisite for efficient resource use is that decision makers at the margin have to balance benefits against costs. But under the bloc grant system Scottish parliamentarians collect only the political benefits of their spending decisions without having to balance them against the political cost of having to raise the taxes to finance that spending.

Fiscal autonomy is the only feasible system that can achieve both fairness and efficiency in the allocation of public spending in, respectively, the UK and Scotland. By fiscal autonomy we mean greater reliance on own-sourced taxes, or, equivalently, greater vertical balance in public funding – where taxes passed downward from central government are a much lesser proportion of public spending by Holyrood. Fiscal autonomy is a relative term with greater or lesser degrees of it being possible.

Critical to our argument is that the fiscal autonomy would be seen by Scottish voters as being a legitimate reform of the Scotland Act, 1998, because it furthers democracy in Scotland. None of the other proposed reforms – all amounting to reducing the size of Scotland's bloc grant using one formula or another, can succeed because they will not be accepted as being legitimate by Scottish voters. Thus, MacKay and Bell (2006) acknowledge with respect to their favoured formula – size of public spending distributions between the regions of the UK allocated according to an inverse regional welfare spending rule, that 'there is no question that implementing these [public spending] savings would be politically unpopular' (p. 51). And they say that this also goes for the McLean and McMillan (2002) proposal to use an inverse per capita regional gross domestic product (GDP) rule.

It is not accidental that Westminster chooses to finance a bloated Scottish public sector – something that according to some experts has by now gone on for a hundred years.[3] We will argue using a simple non-cooperative game analytical framework that this more-than-generous funding of the Scottish public sector is a natural political response to a Scottish threat to secede from the union.[4]

The assumption that fiscal autonomy would be greeted as a legitimate system within the UK by the Scottish electorate is supported by polling data. This indicated substantial support for a Scottish parliament *with* tax powers. Thus, over the six-year period 1997–2003 between 44 and 54 per cent of people polled in Scotland supported this, while only between 6 and 10 per cent supported a parliament without tax powers. Moreover, support for independence was lower than support for a parliament with tax powers – varying between 26 and 28 per cent.[5] More recent polling data indicates the stability over time of voter preferences. Thus, in a YouGov poll taken in April 2008, 38 per cent were in favour of retaining the Scottish Parliament but with greater powers, while only 34 per cent were in favour of retaining it with its present powers. And with regard to Scottish independence, 59 per cent were in favour of retaining the present Scottish Parliament, while only 25 per cent were in favour of a completely separate state outside the UK.[6] However, one problem with all such polls is the effect that misinformation, which has been frequently

drip fed to the Scottish public at crucial voting opportunities, has had on voting preferences and sentiments. For example, at the last election to the Scottish parliament unionist politicians claimed that a vote for independence would imply that voters in Scotland who had relatives or friends in England would find it hard to see their family and friends in an independent Scotland because of heavily handed border controls! Also more subtly, perhaps, the claim that an independent Scotland would be an economic basket case, with all the implications this would have for jobs and the location of companies in Scotland, has often been made, and especially in the 1978 devolution referendum.

In our view, devolution of taxes to the Scottish parliament would be seen as just the other half of 'proper' devolution, the devolution of public spending having done only half the job. Given such legitimacy in the eyes of the Scottish voter, a system of fiscal autonomy in Scotland has some chance of being accepted by the Scottish electorate in ways that other proposals would not.

We think that too often fiscal autonomy is dismissed without serious consideration because the reflex criticism is that 'it is nothing but a step on the way to Scottish independence'. We think this argument is incorrect. Thus, consider the net flow of public spending minus taxation between Scotland and the Rest of the UK. Scottish Nationalists claim that Scotland is a net paymaster to the Rest of the UK.[7] Fiscal autonomy would defuse this argument because Scotland would retain tax revenues raised from the Scottish tax base. On the other hand, if Scotland actually enjoys net inflows of public funds from the Rest of the UK – which government statistics regularly demonstrate is the case,[8] it is by no means obvious that having gained fiscal autonomy, the next step must be to claim independence – there would be no financial saving.[9]

This is not to deny that transition to fiscal autonomy would have to be carefully handled. If as a result of fiscal autonomy public spending in Scotland is set to decline then a period of phase-in is desirable, both from the point of view of the Scottish voter, and of Unionists in Scotland and in the rest of the UK. Moreover, many other details of a system of fiscal autonomy would need to be worked out – for example, how much should Scotland pay for centrally provided services such as national defence, and would some residual bloc grant still flow northwards? Aha, one might say, so Scotland would still need to be paid a ransom for not seceding – so how is it different to the current system or to other proposals? The difference we submit is that fiscal autonomy would be seen as a legitimate system in Scotland and so not so much, perhaps no, compensation would be needed for remaining in the UK. Moreover, in the sequential game model developed below we will argue that granting fiscal autonomy to Scotland

has the potential advantage of changing the order of play. Specifically, Scotland would no longer have the second mover advantage that it has enjoyed for about 100 years.

We will also discuss a proposal to fund Scottish public spending through a Grants Commission, instead of through the Barnett formula. We model decision making in such a Grants Commission as a cooperative game, and we argue that such a system would almost certainly fail to resolve the main issues in Scottish public finances.

SECESSION AND ITS THREAT VALUE

McCrone (1975), in what was a secret government document, wrote that the advent of North Sea oil tax revenues, potentially huge in relation to public spending in Scotland, could promote the nationalist cause. Thus, he wrote that ' [. . .] it is obvious that the surpluses from North Sea oil would open up new opportunities for a nationalist Government' (McCrone, p. 9). He was also clear that to head off the possibility of a nationalist government Scotland would need to be compensated, in particular, through increased regional aid aimed at promoting economic growth in the central belt. In other words, if voters were not to move to support the nationalists, Scotland required a quid pro quo – as the following statement makes absolutely clear.

> If, in five years' time North Sea oil is contributing massively to the UK budget, while the economic and social condition of West Central Scotland continues in the poor state that it is today, it would be hard to imagine conditions more favourable to the growth of support for the nationalist movement. *Very determined steps to urgently transform economic conditions in Scotland will therefore be necessary and the Scottish people will have to be persuaded that their problems really have received the attention and expenditure they deserve if this outcome is to be avoided* (McCrone, 1975, p. 18, italics added).

Increased UK government expenditures in Scotland were thus quid pro quo, and if they were not forthcoming the threat of voting nationalists in larger numbers than previously by Scottish voters would be executed, and the union threatened. Exactly how much compensation was required to remain loyal to the union was an open question, but it is a question that has been grappled with for about 100 years for, according to Devine (1996) support for Scottish nationalism and the desire for home rule in Scotland ebbed and flowed throughout the twentieth century.

In the same vein, McLean and McMillan (2002) and McLean (2005) point out that disproportionately large allocations of public funds to

Scotland have for long been a part of a political strategy to encourage Scotland to remain within the UK. Thus, they quote Stanley Baldwin, Prime Minister in the 1920s and again in the 1930s: 'political unrest [in Scotland] was [not] in the interests of the Union' (McLean and McMillan, p. 9). Baldwin did not therefore seek to reduce allocations of public funds to Scotland under the Goshen formula even though Scotland's population share had fallen below that used in the formula. The Goshen formula distributed public funds to Scotland and Wales in proportion to their respective shares in the UK's population. The Goshen formula they say was used as the minimum share of UK public spending that Scotland would obtain through bargaining on a government department-by-department basis. Good bargainers could generally win more for Scotland. Moreover, things were little different in the period between Goshen and Barnett (1958–78) when the Scottish Office bargained for public money on Scotland's behalf. Indeed, the Treasury's needs assessment exercise of 1979, using 1976–7 data, did find per capita public spending in Scotland (at 122 per cent of England's level) to be above its needs level (estimated to be 116 per cent of England's level).[10]

The Barnett formula was meant over time to converge Scottish public spending to the English level. But in 30 years of the Barnett formula this has not happened. McLean and McMillan (2002) explain why:

> the reason for non-convergence [in per capita public spending between the regions] are political, not mechanical. Even the decision to persist with an incorrect population ratio was probably political. Scotland [in the 1990s] continued to pose a credible threat to the Union, which any SNP resurgence would bring back to life (p. 10).

Moreover, McLean (2005) states that:

> The Secretary of State could protect the Goshen proportion because he had a credible threat at his back. He could tell the cabinet that unless they protected Scotland's spending share the Nationalists would start winning elections, and where would the United Kingdom be then? All Secretaries of State have done this, but the supreme practitioners have been Tom Johnson (Lab, in the Churchill wartime coalition 1941–5), Willie Ross (Lab, 1964–70 and 1974–6), Ian Lang (Cons, 1990–5, and Michael Forsyth (Cons. 1995–7) (McLean, 2005, p. 4).

This narrative in effect says that Scotland is able to obtain a larger share of UK public funds (relative to its 'needs') because it could threaten to leave the Union – or, more narrowly, votes won by the Scottish Nationalists would increase. The implication is that year-after-year bargainers on the part of Scotland held high threat values so 'twisting' the Treasury's arm

into being generous to Scotland. By 'threat value' we mean some level of per capita public spending in Scotland which if not achieved would trigger increasing demands for secession. In particular, the median voter would vote Nationalist.[11] Admittedly, among Scottish historians, there is not unanimous agreement on the thesis of a persistent Scottish secessionist threat. For example, Miller (2005) says that 'arguably a British Government has implemented devolution not so much because it fears Scottish nationalism and secessionism, as because it no longer fears them' (p. 8). And Finlay (2005) rather disputes the notion that separatism was an issue in Scotland for most of the twentieth century – only in the last decade or so of that century did it become of any importance (p. 20). So if the political scientists and historians are divided in their assessment of the relevance of Scottish secessionism what is an economist to do? We have to choose between the shades of opinion and we rather think that secession is indeed a long-standing threat – a point of view that we largely base on the last 30 or so years of opinion poll data that does indeed indicate persistent and significant support for the Scottish Nationalists.

We will now enquire into the insights that basic game theory reveals about the economics and politics of what we shall call the 'bloc grant game'. One thing to explain is why Scotland has been winning it for the last 100 years. A second issue is the likely effect of the introduction of an Australian style Grants Commission in place of the Barnett-determined bloc grant.

DETERMINATION OF THE SIZE OF THE BLOC GRANT IN A NON-COOPERATIVE SEQUENTIAL GAME

Payoffs

We begin this exercise by modelling grant allocation as a non-cooperative game. This game is played between Scotland and the Rest of the UK. The 'player' for Scotland is the median Scottish voter. The player for the Rest of the UK is the Treasury – assumed to have a strong preference to maintain the Union.

Scotland can play one of two strategies: either 'stay in the union' (U), or, 'threaten secession' (TS). The Rest of the UK also has two strategies: to make a 'needs' appropriation (NA), that is public fund appropriations strictly to meet Scottish 'needs' due to deprivation and no more; or, to make a 'large appropriation' (LA), that is, larger than proportional to Scotland's population.

Table 2.1 shows this game in simultaneous play, the payoffs are utility values for each player. Alternatively expressed, you can think of the numbers as showing the ranking of preferences with '4' being the most preferred. In each cell of the matrix Scotland's payoff is written first, those of the Rest of the UK second. Thus, the ranking of outcomes from best to worst for the Rest of the UK is: best, U/NA – Scotland stays in the Union as well as receiving an allocation of public funds proportional to its population; second, U/LA – Scotland remains in the Union but receives a disproportionately large allocation of public funds; third, TS/LA – Scotland threatens secession while at the same time enjoying a large apportionment of public funds; last, TS/NA – Scotland threatens secession but is only enjoying a population proportion allocation of funds.

That Scotland chooses 'stay in the union' is ranked as the Rest of the UK's first and second preferences is reasonable given that the Rest of the UK, *circa* 2009, wants to maintain the Union. That the Rest of the UK ranks 'threaten secession/large appropriation' above 'threaten secession'/'needs appropriation' is also reasonable on the assumption that a threat of secession is more likely to lead to secession if Scotland were to receive the smaller bloc grant (that is, one proportional to its population).

Scotland's utility ranking from best to worst is: best, U/LA – on the reasonable assumption, *circa* 2008, that the Scottish median voter is not a Nationalist, but wants to be compensated for remaining loyal to the Union – he/she perhaps holds some sort of historical grievance against the 'auld enemy' (or, for some other reason, such as a recognition that the proceeds of North Sea oil have effectively been squandered from a Scottish perspective); second, TS/NA – the Scottish median voter threatens secession – tells opinion pollsters that he/she intends to vote Nationalist (or, actually votes Nationalist) if a larger compensatory bloc grant is not forthcoming; equal third and fourth in the Scottish rankings, are U/NA and TS/LA. The former of these is not welcomed by the median voter because no compensation for staying in the union is forthcoming; but the latter combination is also not ranked highly because if secession occurred the large bloc grant would not be paid. Our assumption here is that the median voter is indifferent between these two outcomes. In fact, the outcome of the game in Figures 2.1 and 2.2 does not depend on the median voter's ranking of U/NA relative to TS/LA. Instead of indifference, either could out-rank the other without changing the equilibrium of the game.[12]

Observation of Table 2.1 shows that if the game is played simultaneously neither player has a dominant pure strategy. Moreover, cell-by-cell inspection shows that there is no Nash equilibrium in pure strategies.[13]

Table 2.1 Pay-offs in the Scotland/Rest of the UK bloc grant game

		Rest of the UK	
		Needs appropriation (NA)	Large appropriation (LA)
Scotland	Stay in Union (U)	2, 4	4, 3
	Threaten secession	3, 1	2, 2

However, in practice, the bloc grant game is played sequentially rather than simultaneously. With the same payoffs as just described, in sequential play, a roll back equilibrium can be found. Moreover, it will be shown that the game has a second mover advantage for Scotland.

Begin with the actual case: the Treasury (playing for the Rest of the UK) chooses its strategy first with Scotland choosing second. Figure 2.1 shows the game tree and payoffs. The Treasury reasons that if it chooses a need appropriation bloc grant (NA), Scotland will choose threaten secession (TS) for a Rest of the UK payoff of 1. However, if the Treasury chooses a large bloc grant (LA) Scotland will then choose to stay in the Union (U) for a Rest of the UK payoff of 3. The roll back equilibrium of this game is therefore U/LA with Scotland–Rest of the UK payoffs of 4 and 3 respectively. Scotland therefore maximizes its utility, with respect to the bloc grant decision and stays in the Union.

However, suppose alternatively a sequential game in which Scotland chooses first. Figure 2.2 shows the game tree. In this game if Scotland chooses U, the Rest of the UK chooses NA for a Scottish payoff of 2.

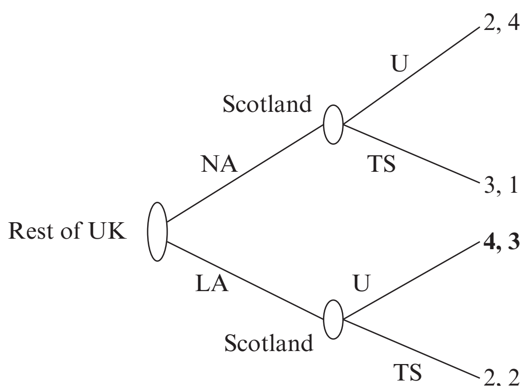

Figure 2.1 Payoffs in the Scotland/Rest of the UK bloc grant sequential game – Rest of the UK chooses first

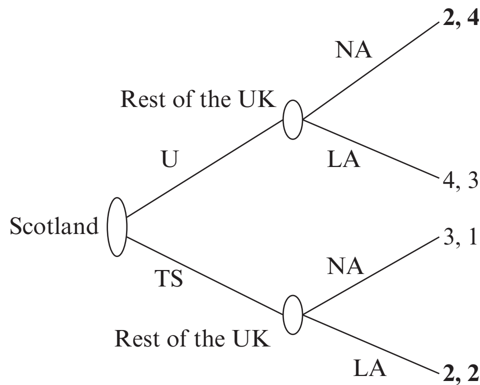

Figure 2.2 Payoffs in the Scotland/Rest of the UK bloc grant sequential game – Scotland chooses first

Should Scotland instead choose TS the Rest of the UK would choose LA, also for a Scottish payoff of 2. Clearly, the Scottish median voter does better when it chooses second (as in figure 2.1, obtaining a payoff of 4) – which we submit is the real-world case.

Thus, in Figure 2.1 Scotland benefits from second mover advantage and maximizes its utility. As we have seen, the large bloc grant payoff that it gets has been criticized both in the Rest of the UK – that questions why a relatively high per capita income region should obtain such high public funding – and in Scotland itself – on the argument that the high level of public funding is bad for the private sector and economic growth in Scotland because the public sector absorbs a disproportionately large amount of resources. However, we have argued, proposals simply to cut Scottish funding run up against Scotland's threat to secede from the union.

Fiscal Autonomy

Fiscal autonomy, because it would be welcomed as being legitimate by the Scottish median voter (at least on the basis of available polling data), could change the order of play so that Scotland chooses first. Here is how this could happen. First, full fiscal autonomy is granted to Scotland – which is accepted as legitimate by the Scottish median voter, but then oil prices or Scottish oil production fall so unbalancing the Scottish budget. After borrowing possibilities are exhausted, Scotland turns to the UK Treasury (activating a clause written into a 'Fiscal Autonomy Settlement'), to ask for a bloc grant to finance 'needs' that it cannot itself now finance. Scotland is

now the first mover and the Rest of the UK the second mover – the public funding game is now played as in Figure 2.2 Accordingly, Scotland gets public funding only in proportion to its needs, and no longer disproportionately greater. The Scottish median voter does not threaten secession both because fiscal autonomy is viewed as a legitimate system in a UK context, and because the revealed weakness of Scottish public finance (in terms of this example). Moreover, those in Scotland arguing that Scotland would benefit from a small bloc grant would be satisfied, as would tax payers in the rest of the UK. By potentially changing the order of play in the bloc grant sequential game fiscal autonomy is all round win–win.

A benefit of fiscal autonomy is that it can deal with a potential time inconsistency problem. We are referring here to the idea that an apparently rational commitment made today may not actually be so when it comes to honouring it at some future date. The classic example, of course, is a central bank's commitment to keep inflation low, but reneges when it has to face the unemployment cost of a tight monetary policy. Under present arrangements, and any of the other proposed reforms of Scottish finances, central government in Westminster cannot credibly commit to not overfunding Holyrood because no mechanism exists for reducing, or getting around, Scotland's high threat value to secede from the union. In the public financing of sub-central government Oates (2004) suggests a 'no bailout clause', but the latter would not deal with Scotland's secessionist threat. We have already argued that fiscal autonomy changes the nature of the game played between the Scottish median voter and the Rest of the UK in the event that Scotland found itself unable to fully finance its public spending – in the event of an oil price collapse perhaps. Fiscal autonomy would also deal with time inconsistency, because it could be written into the original 'Fiscal Autonomy Settlement Agreement' that, should Holyrood have occasion to ask Westminster for resumption of the bloc grant, it would be given an amount no more than proportional to its relative per capita income. And with Scottish public finances in a mess, so dampening support for the nationalists, and with Scotland as the supplicant, its threat of secession will have been set aside.

We emphasize that the foregoing analysis is based on the idea that the Scottish median voter is neither a Nationalist nor a dyed-in-the-wool Unionist, rather, he or she is somewhere in the middle. The main conclusions that we arrive at is that in the non-cooperative sequential game in which the bloc grant system currently operates – Scotland with a second mover advantage – the median voter gets the largest payoff possible.

However, this is not to say that the present Barnett bloc grant system is best either for the Union or for Scotland. The Rest of the UK is left to ponder whether it is 'fair' to have to pay a premium to keep Scotland in

the Union. And, while Scotland enjoys a bloc grant larger than 'needs', Scottish governments are bereft of incentives either to spend the bloc grant to raise the rate of economic growth or to balance resource deployment between the public and private sectors – as would elected representatives in political systems where they are responsible for and so pay the political costs of imposing taxes, as well as enjoying the political benefits of their spending decisions. Our above stylized game clearly does not take account of the median voters' desire to have in place an appropriate incentive structure for both the public and private sectors, nor does it say anything about how the median voter has been influenced by the kind of misinformation he or she has been subjected to at crucial junctures in Scotland's recent political history.

A 'GRANTS COMMISSION' IN A COOPERATIVE NASH BARGAINING GAME

In the previous section determination of the Scottish bloc grant is modelled as a non-cooperative game between the Scottish median voter and the UK Treasury. There is a proposal to reform Scottish public finances along the lines of an Australian-style Grants Commission. In this section we discuss this proposal, model it as a cooperative game, and conclude that a Grants Commission is unlikely to be a viable solution to the issues under discussion.

McLean and McMillan (2002) and McLean (2005) discuss the idea that the allocation of public money to Scotland could be channelled through an Australian style Commonwealth Grants Commission. Such a Grants Commission would be independent of the Treasury, and its members would be appointed by agreement between the UK government and UK regions. Each region would make its case for some desired level of public funding in its region, but would receive this only by unanimous vote of the Commission. What is unclear is how a UK Grants Commission would handle a credible threat of secession from the Union by Scotland. Scottish voters would still have the right to vote any way they chose in reaction to decisions made by a UK Grants Commission. It seems to us, therefore, that for a Grants Commission to be effective a necessary first step would be to establish its legitimacy as a vehicle for dealing with horizontal and vertical balances in the UK. Without this legitimacy anything done in a Grants Commission to reduce Scotland's bloc grant to levels commensurate with any of the formulas mentioned earlier would still run up against a secessionist threat from Scotland. Basically, without the prior establishment of legitimacy it is hard to see how a UK Grants

Commission would change the fundamental rules of the public spending game in the UK.

Anyway, in a UK Grants Commission, appointed representatives would bargain over the allocation of per capita public spending between the regions. Unless there was unanimous agreement, public funds would be allocated according to a default rule in which per capita public funding in each region of the UK would be determined by an inverse per capita GDP rule – the lower is a region's relative GDP the greater would be the level of its public funding. McLean argues that all 12 regions of the UK represented on the Grants Commission would hold some credible threat against all of the others. Though we must say that some of these stretch credulity 'London offers in particular the threat that the public services used by the editors of the *Daily Mail* and the *Sun* could deteriorate sharply if the government does not throw money at them' (p. 8). But the Grants Commission proposal is not necessarily doomed because of a lack of credible 'credible threats' on the part of some region or other, but because it is not cognizant of the fact that some regions, in particular, London and the South East of England, are the paymasters to all the other regions. Rather than it being in their interests to agree to payments to some regions above their default levels, so that they will get their share too, it is likely to be in their interest to encourage collapse to the default, as this spells lower public spending in the UK as a whole and lower taxes for them. On this argument our expectation is that Scotland would find its bloc grant from the Rest of the UK falling. Thus, we don't see how the Grants Commission proposal deals with Scotland's credible threat to secede – a threat that has to be fed with larger and larger bloc grants, not by smaller ones.

Thus, the idea behind the suggestion for a Grants Commission is to create fairer sharing of public spending between Scotland and the Rest of the UK through a process of cooperative bargaining that either reaches unanimous agreement on the allocation of public funds, or, else, there is fall back to a default option – that itself has been agreed by the players. In what follows we will assume that bargaining in a Grants Commission is more than just a zero sum game. Specifically, we will assume that 'fairer shares' will also contribute to an increase in the UK's real gross domestic product. Such an outcome is possible if a reduced bloc grant led to a lower tax burden in the UK as a whole. This could result in greater private sector activity and, hence, to a larger real GDP. Out of this enlarged GDP, at constant tax rates, public spending in the Union as a whole, in the long run, could increase – though this would, of course, be a political decision.

In fact, we think that the benefits of a UK Grants Commission are questionable. Our argument is illustrated in Figure 2.3. The key assumption, reflecting our earlier discussion, is that the existing Barnett grant is

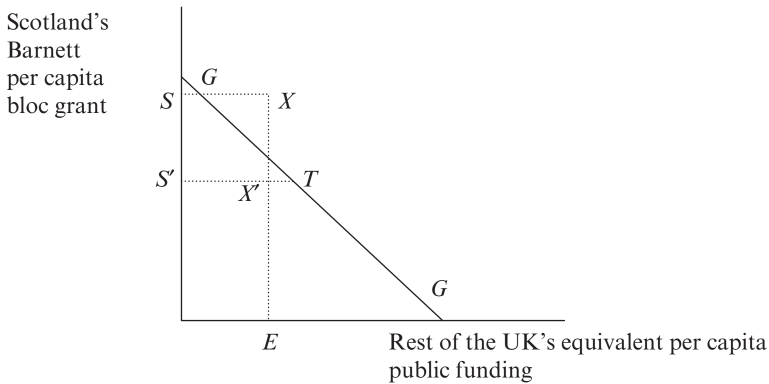

Figure 2.3 Bargaining in a grants commission

at, or near, Scotland's threat value. That is, if the flow of public funds to Scotland fell much below current levels, the Scottish median voter would move toward supporting secession.

In Figure 2.3 the existing Scottish per capita bloc grant is at the level *S* while public per capita funding in the rest of the UK is at a lower level, *E*. Based on either the Grant Commission's default or a (non-fudged needs assessment exercise) Scotland's per capita bloc grant falls, *S′*. As mentioned, the resulting lower UK public spending and tax burden could produce an aggregate gain such that real GDP increases, and out of this larger GDP, public spending could increase. The aggregate gain in potential public spending (that is, above the level at *X′*) can be allocated between Scotland and the Rest of the UK anywhere along the line *GG*, and the larger is the aggregate gain the further to the right is *GG*. However, given Scotland's threat value of *S′* and the Rest of the UK's threat value of *E*, any outcome agreeable to both side must be the northeast of *X′*. The closer the final outcome is to point *T* (on *GG*) the greater is the gain to the Rest of the UK and the less is Scotland's.

Figure 2.3 has been set up such that, at least in the not very long run, Scotland would lose out from bargaining in a Grants Commission. This is because *GG* passes below point *X*, and even if Scotland were to obtain all of the aggregate gain, it would still be worse off than at *S*. However, if indeed there is an aggregate gain for the Union as a whole from cutting public spending in Scotland, over time, *GG* may move so far to the right that it eventually passes to the right of point *X* – Scotland's initial, threat value determined by its per capita bloc grant. If this did in fact happen, Scotland in the long run could end up with a larger per capita bloc grant than in the initial position.

Assuming this happy long-run outcome is possible Scotland faces a tradeoff. When the Grants Commission cuts the Scottish grant below Scotland's threat value, Scotland could indeed move to leave the Union, but it would be giving up on the potential long-run increase in public spending due to increased economic growth in the UK. It is impossible to know how a hypothetical median voter would view this trade-off. It is relevant that costs (of lower public spending) would be felt immediately, while benefits would only accumulate in the long run and, anyway, would be uncertain – depending on whether the UK tax burden did in fact fall, or whether the Grants Commission would simply play a zero sum game transferring public spending from Scotland to the Rest of the UK with no overall reduction in the UK tax burden.

If the Scottish median voter sees the Grants Commission as a forum for the playing of a zero sum game in which he or she is the loser, the Grants Commission really has no degrees of freedom to reduce Scottish public spending. Political realities will not have changed. The Grants Commission must choose between fudging the Scottish grant so that it remains at the level of its threat value, S' in Figure 2.3, or cutting it to S, so risking Scotland's exit from the Union. But this is exactly the problem that the Treasury faced when it introduced the Barnett formula. Start off with a grant equal to Scotland's threat value and hope that nobody in Scotland notices the Barnett squeeze. And if somebody does, then fudge the Barnett process in someway (for example, make payments above Scotland's population share) so that the squeeze doesn't happen. A Grant's Commission would face pretty much the same problems. It would have to find its own set of 'fudge factors' whenever the Scottish bloc grant threatened to fall below Scotland's threat value.

FISCAL AUTONOMY

Viewed in the light of the foregoing discussion our proposal for fiscal autonomy for Scotland has two main advantages. First, if Scotland accepts that public spending by the Scottish Government should be financed through Scottish sourced taxes, the Scottish high threat value that underpins the large bloc grant allocations to Scotland over the many decades from Goshen through Barnett melts away. We also believe that the potential effectiveness of a Grants Commission would be defeated because it does nothing to change Scotland's 'we will exit the Union' threat value. If, however, Scotland voluntarily embraces fiscal autonomy, and is therefore determined to rely upon its own funds, the Rest of the UK is freed from making more than population proportional bloc grant

payments to Scotland. Thus, fiscal autonomy changes the bloc grant game in a way that none of the other proposals manage.

Nor do we think that fiscal autonomy would be a threat to the Union because it would be understood that if per capita public funding in Scotland began to decline this could not any longer be blamed on the 'dastardly' UK central government. Indeed, nostalgia for the old, generous, UK system may well heighten support for the Union in Scotland, rather than the opposite which is feared would happen if Westminster attempted to cut the Scottish bloc grant below LA and toward NA.

Would booming Scottish public finances under fiscal autonomy have the opposite effect on public opinion in Scotland, favouring secession? Well, perhaps less so than under the present system whereby increased tax revenues – such as those resulting from increased prices for North Sea oil – are passed straight to Westminster, fuelling some resentment in Scotland. At least with fiscal autonomy, increased tax revenues would be retained in Scotland. Second, fiscal autonomy offers Scotland a whole set of efficiency incentives that are absent in the Barnett system and would almost certainly be so under any likely Grant Commission system. As much of our other work on devolved taxes is about tax incentives we will not say anything more about them in this chapter beyond what was said in the introductory paragraphs – namely, that we expect greater efficiency in public spending whenever politicians have to balance engendered benefits against the political costs of having to raise taxes.[14]

CONCLUSIONS

In this chapter we have discussed the Barnett formula and its precursors as resulting from a non-cooperative game in which the Scottish median voter holds a threat of secession. In effect, Scotland gets to choose what it does after spending decisions have been made in Westminster – a second mover advantage. It is because of this combination of high threat value and second mover advantage that for about a century Scotland has been able to extract disproportionately high levels of public spending from the Westminster parliament. Having understood these political imperatives one is in a better position to appraise the various proposals for reform of the bloc grant system.

In recommending only limited tax devolution and continuation of a (much smaller) bloc grant, what other reform proposals do not explain is why the Scottish median voter would accept overall lower funding (own-source taxes plus residual bloc grant) in the interests of 'fairness' in the UK. As long as the threat of secession hangs over the UK, the median

voter still needs to be compensated. Fiscal autonomy would eliminate any bloc grant, and in the event of lower oil prices, Holyrood could some day be supplicant (to Westminster) and would take what was offered – Scotland by becoming the first mover would lose its second mover advantage. In the forgoing economic models 'fairness' does not come from the goodness of the Scottish median voter's heart, but it could if the structure of the Scotland–Rest of the UK bargaining game was changed – fiscal autonomy is a means of restructuring that game.

We have also argued that other reform proposals fail to deal adequately, if at all, with the need to increase efficiency in Scottish public spending. We argue, however, that fiscal autonomy in Scotland could go a long way toward stemming the threat of secession because fiscal autonomy would be welcomed as a legitimate reform in Scotland. Moreover, fiscal autonomy would help to raise efficiency in public spending in Scotland – an imperative that the other reform proposals would fail to achieve.

NOTES

1. Channel 4 News, 6 July 2007. In a similar vein: 'The problem is not in fact one of expenditure but mainly one of justification or legitimacy. Because Scotland is so small, the Scottish bias in per capita expenditures has little or no impact on per capita expenditure in England. But since the debate over devolution has made the bias visible, it could be a source of English resentment, even if its elimination would make no detectible per capita benefit to the English. It has to be quietly forgotten, or eliminated or justified' (Miller, 2005, p. 11).
2. MacKay and Bell (2006).
3. McLean and McMillan (2002).
4. Unless Scottish voters have a change of heart and the threat of secession from the UK evaporates, none of the other reform schemes can succeed because they will not be viewed as legitimate. Besides, none of the lets-reduce-the-size-of-the-bloc-grant proposals do anything to tackle the absence of proper, voter driven, incentives in Scottish public spending.
5. Research Report (University of Oxford, Department of Sociology), using polling data drawn from Scottish Election Survey 1997; Scottish Social Attitudes Survey 1999; British Social Attitudes Survey; 1999; Devolution and Constitutional Change surveys 2001 and 2003, http://www.sociology.ox.ac.uk/research/National%20Identity%20and%20Constitutional%20Change.doc.
6. YouGov/*Daily Telegraph* Survey, Sample Size: 1175, Fieldwork: 24-8 April 2008, http://www.yougov.com/uk/archives/pdf/08%2004%2028%20scotland%20topline.pdf.
7. For example see IT, 14 June 2007, http://www.channel4.com/news/articles/uk/do+scots+get+a+better+deal/558752.
8. Government Expenditure and Revenue in Scotland (GERS), various years – a Scottish Executive National Statistics Publication. According to calculations by Alexander Kemp (University of Aberdeen), counting 83 per cent of oil tax revenues as Scottish but using an oil price of only $65 per barrel, Scotland ran a substantial budget surplus for much of the 1980s, and was in deficit thereafter until the sharp rise in oil prices beginning in 2006. Oil prices averaging about $120 per barrel would make a substantial

difference to the size of Scotland's budget surplus in recent years (*The Economist*, 26 June 2008).

9. Granting fiscal autonomy is by no means the end of the UK as a sovereign state. For one thing what Westminster grants can be revoked. It is through the sovereign Westminster parliament that the Scottish parliament exists at all. And if the powers of the Scottish parliament are to be expanded, it will be through laws enacted at Westminster. Indeed, what powers the Scottish parliament already has – spending powers over devolved matters, was through the Scotland Act passed in 1998 by the Westminster parliament. Expanded powers over taxation – fiscal autonomy (and, perhaps, rights to a continuing smaller bloc grant, or, obligations to make payments out of taxes raised in Scotland to Westminster for centrally provided services such as national defence) must be enacted in the same way. In this sense, devolution does not dilute the sovereignty of the UK over its territories – short of a war of secession, the four countries of the UK constitute a sovereign entity. This sovereign entity not only has rights over internal laws, but it also has rights and obligations in international law – such as the right to sign treaties, to declare war, to declare peace, whether or not to recognize new countries, and for its diplomats to be protected when on duty in foreign countries. None of this constitutional legal paraphernalia is upset by the extension of fiscal autonomy to Scotland.
10. Source: McLean and McMillan (2002).
11. Very many polls of Scottish opinion show support for the Scottish Nationalists fluctuating, but taking annual averages, typically over the last 34 years or so in the 23–29 per cent range (see compilation at http://www.alba.org.uk/polls/pollwestminsteryearly.html). Over this period, most often support for the SNP is less than for Labour, but greater than either the Liberal Democrats or the Conservatives. However, in monthly poll data support for the SNP sometimes approaches, or, even surpasses, 50 per cent – for a compilation see the web site: http://www.alba.org.uk/polls/pollwestminster74.html. Moreover, Heath and Smith (2005) in examining some Scottish poll data claim: 'there are four groups of people – nationalists/separatists, potential nationalists/separatists, unionists and the disengaged. While nationalists/separatists are clearly in a minority . . . unionists do not comprise a majority' (p. 1). Again our point is that voting intentions in Scotland are fluid, and that no one political party has a lock on a majority vote.
12. We have experimented with lexicographic preferences where the Rest of the UK prefers U and NA, but that U comes before NA. Similarly, the Scottish median voter prefers U over LA, and that its preferences are lexicographic in that LA comes first. This setup creates both Nash and roll back equilibriums of TS/NA. However, this equilibrium does not square with historical facts. The Scottish median voter is observed in many opinion polls not threatening secession and Westminster appropriations are repeatedly greater than NA, that is, they are LA. As is shortly to be shown the roll back equilibrium in the game defined in the text is U/LA and this does square with history.
13. It would be fruitless to search for mix strategy equilibrium as it is difficult to conceive of the Scottish median voter playing such a strategy.
14. See Hallwood and MacDonald (2004, 2005, 2006a, 2006b); and MacDonald and Hallwood (2006).

3. The economic case for fiscal devolution

In this chapter we examine the standard economic case for the devolution of fiscal powers to a sub level of government: with the current constitutional settlement in the UK from Westminster to Holyrood. We believe that these arguments would apply a fortiori in terms of Scotland achieving political independence.

The idea of properly aligning public spending and taxing decisions at sub-national levels of government is not a new one. Indeed, Adam Smith in 1776 (p. 250) pointed out that:

> those public works which are of such a nature that they cannot afford any revenue for maintaining themselves, but of which the conveniency is nearly confined to some particular place or district, are always better maintained by local or provisional revenue, under management of a local and provincial administration, than by the general revenue of the state. . . . Were the streets of London to be lighted and paved at the expense of the Treasury, is there any probability that they would be so well lighted and paved as they are at present, or even at so small an expense?

Smith also questioned the fairness of having people outside a benefit area paying for benefits enjoyed by others:

> The expense, besides, instead of being raised by a local tax upon the inhabitants of each particular street, parish, or district in London, would, in this case, be defrayed out of the general revenue of the state, and would consequently be raised by a tax upon all the inhabitants of the kingdom, of whom the greater part drive no sort of benefit from the lighting and paving of the streets of London (p. 250).

A general 'tax upon all of the inhabitants of the kingdom' to the benefit of higher public spending per head in Scotland than in England or Wales has become a political issue in England, with, as we pointed out in Chapter 2, some people pointing to the unfairness of this situation. Of which, more later.

As we noted in the Introduction, the current system of bloc grant from Westminster is far from providing a balance between public spending and

taxing in Scotland which, we think, has unfortunate long-term consequences for the Scottish economy. The politics of the Scotland Act (1998) – some devolution, but not too much, has gotten in the way of sensible economics. For example, the United Kingdom has one of the largest vertical imbalances in Europe, with only 14 per cent of revenue raising devolved to sub-central levels of government.

TRADITIONAL CASE FOR DEVOLVED TAXES

The 'traditional' case for devolved taxes starts with the work of Tiebout (1956). It considers the provision of goods at the regional level as well as the appropriate revenue collection system at this level of government. The basic principle is that sub-central governments should be able to provide goods and services that match the particular preferences and circumstances of their constituents. The key presumption is that the provision of public services should be located at the lowest level of government encompassing geographically the relevant costs and benefits. In that way allocative efficiency and economic welfare can be increased above that generated by a more uniform allocation mechanism.

A specific example of these gains from tax devolution is seen in a simple model in which there are two regions, each having different demands for a single public good. The regions are assumed to have the same costs of provision, households are immobile between them, there are no interregional externalities, and there are no economies of scale in the production of the public good. In this context, the provision of a uniform level of public service, or the same quantity/quality of public goods, will be inefficient because the marginal benefits of the public service will differ between the two regions. Sub-central government is better equipped to assess the preferences and needs of local households at lower cost. The magnitude of the gains from tax devolution here depends crucially on how much demand differs between regions. As the costs of provision are assumed to be the same, the welfare loss from not having a degree of tax devolution will depend on how insensitive demand is to price changes. Since public goods are known to be highly price inelastic (see Oates, 1996) the potential welfare gain from fiscal federalism is likely to be great.

The assumptions in the above model are of course quite extreme, but relaxation of the assumptions does not undermine the basic case for tax devolution. Indeed, in the classic Tiebout (1956) model, labour mobility between regions is an important factor in achieving the most efficient outcome. For highly mobile households vote with their feet and move to the area which provides the best fiscal package for them. The optimum

outcome in this case mimics the perfectly competitive market solution, in which the sum of the marginal rates of substitution equals marginal cost.

Relaxing the simplifying assumption that costs are the same across regions strengthens the case for tax devolution: if there are interregional differences in costs, local government can take advantage of this. Relaxing some of the other assumptions in the baseline model do, however, moderate the case for a high degree of tax devolution. For example, if there are important spill-overs or there are economies of scale in public provision, the presumption is that central government should either supply public goods or that the tax system should be tilted to internalize these effects.

As just mentioned, the 'traditional' case for some tax devolution considers the provision of goods financed by taxes at the regional level as well as the appropriate revenue collection system at this level of government. In what follows we take the 'regional' level as the relevant decentralized tier of government. We will sometimes use 'sub-central government' for level(s) of government below that of 'central government'.

The case for greater tax devolution to Scotland has to consider:

- How best to provide public goods and services at the regional or federal level;
- The effect of tax devolution on creating a hard budget constraint on Holyrood and how this could impact on needs equalization between regions in the UK;
- The role of fiscal devolution in stimulating economic growth.

PROVISION OF PUBLIC GOODS AT THE REGIONAL OR THE FEDERAL LEVEL

Equity Versus Efficiency

In the literature on fiscal federalism the equity versus efficiency issue is usually seen as trading off some equity (something approaching equality of per capita spending between the regions in a country such as the UK) with greater efficiency in public spending at a sub-central government level such as Scotland's. If economic efficiency and economic growth are improved at this level, it is then possible that after a time per capita public spending at the Scottish level could increase above what it otherwise might have been. Thus, the argument goes, greater tax devolution to a region involves at least a short-run trade-off between equity in regional public spending and efficiency in government spending.

In the context of the UK, the equity versus efficiency argument is somewhat muddied by two things. First, Scotland receives more public spending per head than does Wales and several English regions despite the fact that Scotland has higher income per head than these other places. Second, and in counter-poise to this, as the SNP has argued for years, Scotland may be in budget surplus with the rest of the UK – that is, the flow of taxes from Scotland into the UK's Consolidated Fund, may exceed the flow out of the Consolidated Fund to Scotland. Indeed, according to Government Revenue and Expenditure in Scotland (GERS, 2008) this was probably the case when North Sea oil tax revenues are counted as being Scottish.[1] Thus, nationalists offer different interpretation of the word 'equity'. What is equitable on this definition is that Scotland should be able to retain all of its natural resource tax revenues (as well as other revenues), because these natural resources are Scottish and not British. Indeed, very many countries heavily reliant on a natural resource base have claimed ownership of 'their' natural resources (and regions within countries – for example Alaska and Alberta – have followed a similar route). This claim, in the case of many oil exporting countries was executed through the nationalization of national assets – taking them out of the hands of multinational corporations (see for example, Penrose (1968)). Another way of claiming 'national assets' is through secession from the larger entity – so winning the right to independent management of the claimed resources. While the attempt to secede has often led to civil war (see Hallwood, 2007) it is very doubtful that this would happen in the British case – Scotland would simply be let go by the rest of the UK.

Thus, from a nationalist's point of view there really is no equity–efficiency trade-off because what is equitable is that a country should own and manage its own natural resources, and if reliance on own-source taxes raises efficiency then all the better.

More on Efficiency

The basic principle in the traditional theory of fiscal federalism is that sub-central government should have the ability to provide goods and services that match the particular preferences and circumstances of their constituents. The key presumption of tax devolution – like that of subsidiarity in the European Union – is that the provision of public services should be located at the lowest level of government encompassing geographically the relevant costs and benefits. In that way efficiency and economic welfare can be increased above that generated by a more uniform allocation mechanism.

This 'benefit rule' is standard theory in the field of public finance. Rational decisions are much more likely to be made when people in a 'benefit region' have to face up to the costs as well as enjoying the benefits of public expenditure. In terms of this kind of argument, goods which are ideal candidates for centralized provision, because their benefits extend nationwide (or there are economies of scale) are foreign affairs, defence and interregional infrastructure such as transport and telecommunications. But many other public goods have benefits that are locationally circumscribed – such as the local fire department, street infrastructure, and spending on health and education to name a few. Of course, the efficient provision of these goods or services may also be ensured in a system where private sector companies have to enter a competitive bidding process for their provision.[2] Indeed, if a single private sector company is providing goods or services across a large enough number of sub-central groupings they may be able to benefit from economies of scale.

De Mello (2000) has a nice general statement of some of the benefits of tax devolution:

> The performance of the public sector can be enhanced by taking account of local differences in culture, environment, preferences and needs, endowment of natural resources and economic and social institutions. A better match between the supply of public goods and local demands requires information on local preferences and needs; this information can be extracted more cheaply and accurately by local rather than by central governments. This is because local governments are closer to the people and hence more identified with local causes, more sensitive to local problems and more responsive to local demands. Fiscal decentralisation consists in this respect, of shortening the informational difference between the providers and recipients of public goods and services so as to reduce information costs and boost public sector efficiency in service delivery.

This argument supports the devolution of the spending function of government to Scotland as in theory her residents are better able to express their preferences for public goods and services through Scottish politicians in Edinburgh than through Westminster where Scottish representation is diluted. But the Scotland Act did not devolve the necessary tax powers so that Scotland could operate as an effective 'benefit unit'.

As we said earlier, the idea of a benefit unit encompassing decision-making over both costs as well as benefits has a long lineage in economics. Charles Tiebout argued that the idea of a benefit unit applied even, perhaps, especially, when households and firms could vote with their feet. That is, mobile households and firms could choose the particular benefit unit that supplied the public goods and services that they most wanted. The distribution of households would be rational as long as each paid the

full cost of the goods and services supplied. This benefit unit argument – paying for what you get (in a world of either geographically mobile or immobile households and firms) is important for two main reasons. First, because the quantity of public goods and services supplied will be neither too large nor too small, when the cost and benefit of the last few items of a public good produced are equal production is at the right level. If the cost of the last few units (that is, marginal cost) is greater than marginal benefit, the provision of public goods is too great. When marginal cost is less than marginal benefit there is a case for expanding provision. It is for this reason we argue in favour of at least some devolution of taxes to facilitate a *marginal tax rule* that we discuss later.

Second, if tax costs are properly apportioned to benefits, taxes are non-distortionary in that they do not adversely affect the locational decisions of households or firms. Moreover, if costs vary between regions the case for greater rather than lesser tax devolution is strengthened – because it is difficult for central government to vary the supply of public goods between regions. Where interregional cost differences exist, a sub-central government can take advantage of this to improve welfare – providing more of the public goods that have low costs and less of those with high costs.

Macroeconomic Stabilization and Income Distribution

As we have seen, the fiscal federalism literature, for example, that of Oates (1996, 2004), contends that public goods and services whose benefits extend nationwide should be provided by the centre (examples of these would be defense, social security and international relations). The theory also contends that functions of macroeconomic stabilization and income redistribution should also be left with central government. With high capital mobility, a fixed exchange rate and a unitary interest rate, fiscal expansion in a single region within a country would spillover into other regions. Even so, coordination of fiscal policy at the regional level is not impossible, especially if orchestrated through central government. Redistribution at the local level is hampered by the mobility of households. For example, the provision of more generous social security in one region will likely lead to an influx of poor people and an exodus of higher income individuals who have to bear the tax burden. Should fiscal federalism prevail, Scottish politicians should remember this simple fact – using sub-central government budgets to perform income and benefits redistribution could well have serious adverse consequences. In many cases the well-off can easily move their primary residence out of Scotland.

HARD AND SOFT BUDGET CONSTRAINTS

Moral Hazard

In Chapters 4 and 5 we discuss the kind of taxes and grants that would be required to match expenditure in Scotland. As we shall see, grants are needed in any fiscal federalist solution in order to ensure that the objective of needs equalization is satisfied. However, the principle of equalization, effected by a bloc grant, raises the moral hazard issue caused by the lack of a hard budget constraint on public spending in Scotland. If a region knows that the size of the bloc grant it receives is related to the size of its fiscal imbalances, the incentive to reduce its fiscal imbalance is compromised: the region in effect faces a soft budget constraint. Relevant to what we are talking about is the so-called 'flypaper effect': namely that 'money sticks where it hits'. Money received in the form of a bloc grant from the central fiscal authority will be spent, rather than used for regionally focused tax cuts, by the regional fiscal authority.[3] Equally a cut in the size of grants from the centre leads to lower expenditure at the devolved levels.[4] This moral hazard implicit in bloc grants is a good reason why fiscal autonomy is likely to have better economic efficiency properties than does fiscal federalism with bloc grants.

Tax Competition Promoting Efficiency

The 'new fiscal federalism' (Oates, 2004) takes a public choice perspective. This contends that politicians and civil servants are not seen as necessarily behaving to maximize the welfare of the electorate; rather they are concerned with their own utility – and for reasons of personal satisfaction, having control over a large budget is better than a small budget. This public sector as a monolith (Leviathan) argument is now influential and implies that fiscal federalism acts as a constraint on the behaviour of a revenue-maximizing government.[5] At issue is how to align more closely the decisions of politicians and bureaucrats (the agents) with those of the electorate (the principal). From this public perspective horizontal tax competition between regions has the dual benefits of stimulating private enterprise and reducing the scope for wasteful government spending and therefore increased fiscal decentralization should limit the size of the public sector. Further, given this combination of benefits, increased tax competition between jurisdictions need not mean reduced provision of public goods.

However, the ability of intermediate tiers of government in the UK to compete on their respective fiscal packages is limited to the extent that it is

only the Scottish Parliament that currently has the ability to change taxes and many of the significant UK regions, such as the North of England, do not have an elected assembly which could compete on taxation and expenditure. Competing tax jurisdictions don't exist in the UK. And even if they did, factor mobility, particularly labour mobility, is known to be limited in the UK, and so it is unlikely that tax competition would have its desired effect. Furthermore, empirical studies testing the 'Leviathan' hypothesis have produced conflicting results.[6]

Cooperative Federalism and Inter-Governmental Collusion

Cooperative federalism (coordination of tax regimes between federal units) can serve governmental interests rather than those of their citizens.[7] Generally, the constitutional expert Ronald Watts (1996) comes out against excessive cooperative federalism as there is some 'democratic value in competition among governments to serve their citizens better' (p. 55). Indeed, Canada's Representative Tax System (RTS) that allows provinces to obtain the same fiscal revenues when they levy the same tax, creates perverse tax incentives in entitlement receiving provinces.[8] Since the formula is based on tax bases, there is no incentive for a receiving province to cut its tax rates to attract inward investment, thereby increasing its tax base because its entitlement under the RTS would be correspondingly reduced. Also, tax rates in receiving provinces might be set too high because there is no financial penalty for reducing the tax base – any lost revenues caused by relocation of producers avoiding the high tax rates is offset by the entitlement payments.

Time Inconsistency

However, the benefits of moving to a harder budget constraint might be lost unless central government can credibly commit to its budget constraint. This is a so-called '*time inconsistency*' issue. Unless central government can credibly commit not to rescue an overspending sub-central government or distance itself from political pressures from sub-central government to raise spending limits, spending by sub-central government is unlikely to be contained. The issue of time consistency has for some time now been regarded as a key element in effective anti-inflation policies of central banks around the world. We would argue that the concept of time consistency is a key element in the design of an appropriate degree of tax devolution for Scotland and we see this as an important part of the institutional framework which ensures the credibility of such a system. One way of achieving time consistency is to have a 'no-bailout' clause[9]

in the financial settlement with Westminster. The exact nature of such a clause is at this time difficult to foresee. However, such a clause could be backed up with legislation that prevents a bailout in predefined circumstances, and it is even possible to make members of the Scottish Executive personally liable if a bailout did occur. It could also be further reinforced by ensuring that any debt issued by Edinburgh was its liability and not Westminster's.

Moreover, fiscal autonomy for Scotland would be as convincing a method, short of independence, of imposing time consistency as any we can think of. With a degree of fiscal autonomy that is far along the spectrum of tax devolution, Scotland would have very largely to rely upon its own tax sources (as well as any money that it could borrow).

Insurance Function

What might be compromised in a move to a harder budget constraint – the closer matching of spending and taxing in Scotland – is the insurance function played by central government. Regions affected by adverse asymmetric economic shocks may be supported by transfers from central government – but this is likely to be more difficult when sub-central government spending and taxes are closely matched. Such asymmetric shocks could well occur if Scotland was, say, overly reliant on North Sea oil tax revenues, known to be quite variable over time. The trade-off between risk sharing and moral hazard is problematic for the design of a system of tax devolution.[10] One way around the issue might be for central government to insure individuals (for example, as with unemployment insurance) thereby guaranteeing benefits to welfare recipients and senior citizens.[11] The discussion here reinforces the point made earlier that in designing a fiscally devolved structure for Scotland, care has to be taken in balancing the vertical and horizontal aspects of a fiscal system. We return to the issue of risk sharing below.

TAX DEVOLUTION AND ECONOMIC GROWTH

Although various degrees of tax devolution are not the central mechanisms which create economic growth, there are nonetheless a number of arguments which suggest that there may in fact be an important link. Here we consider these arguments and also mention some empirical evidence which explores the links between tax devolution and growth. However, our main discussion of the empirical evidence on tax devolution is postponed until Chapter 9. The key economic argument in favour of greater tax devolution,

that it improves efficiency in the use of resources ('allocative efficiency'), should also apply in a dynamic – economic growth – framework.[12] For example, the ability of local politicians to better reflect local preferences on education, innovation, private capital and the infrastructure could have an important influence on growth.

A second argument, and one which we believe may be of considerable importance for Scotland, is that the current devolution settlement for Scotland does not give local politicians an incentive to improve economic growth in Scotland. At present the Scottish parliament is given a lump sum, based on the Barnett formula, which is spent on public services and goods and politicians have little incentive to spend much of the budget on improving economic growth since the benefits of that improved growth, in terms of increased tax revenue, accrue to the exchequer in London. Also, if the 3 per cent variable tartan tax was used to cut income tax and stimulate economic growth there is currently no borrowing facility in place to meet the potential short-run short fall of revenue and any revenues accruing from the improved growth performance would accrue to Westminster. Giving politicians in Scotland an incentive to improve economic growth would effectively reward Scotland with the benefits of growth – thereby increasing the incentives to promote it.

A third argument, which is related to the previous one, is that greater tax devolution might not only provide incentives for local politicians to consider local preferences but also to spend time searching for innovations in the production and supply of public goods and services which could result in their costs and prices being lower.

A fourth argument in the theoretical literature is that by lessening the concentration of political power and promoting some tax competition, greater tax devolution would loosen the grip of vested interest groups on public policy and this promotes democracy and (longer term) economic growth.[13] That said, achieving allocative efficiency in practice has two dimensions: the incentivizing dimension, associated with greater revenue powers discussed above – and also improved productivity on the spending side. Devolution has to provide the opportunity to realize greater efficiency on the spending side – but many feel the potential has not been fully grasped. For fiscal federalism to work the appropriate institutional framework has to be in place including a willingness on the part of the local politicians to abide by the rules of a hard budget constraint.[14] In this regard, one particular aspect of the Scottish scene is that there is some evidence to suggest that Scotland is more producer orientated and resistant to competition, particularly in public services, so undermining the potential gains in allocative efficiency.

As a final argument, it is also interesting that changes in savings patterns under a fiscally devolved system may lead to a higher rate of saving. For example, Brueckner (1999, 2005) has argued that fiscal devolution, by allowing public good levels to be tailored to suit differing demands of young and old consumers, who live in different jurisdictions, increases the incentive to save. This stronger incentive can, in turn, lead to an increase in investment in human capital, and a by-product of this higher investment is faster economic growth.

FISCAL DEVOLUTION AND SOCIAL CAPITAL

A number of researchers have argued that decentralization of fiscal policy, by bringing government closer to the people, may strengthen social capital. Although this literature probably has greater import for developing and transitional countries, it is worth briefly outlining here. To quote De Mello (2000) again:

> social capital is a multidimensional concept, broadly defined as trust, norms, and networks that foster mutually beneficial cooperation in society. It involves civic virtue, interpersonal trust, social cooperation and cohesiveness, and associational engagements among social groups.

A somewhat narrower definition defines social capital *as informal norms that promote cooperation between individuals*.[15]

Knack and Keefer (1997) try to extract a common element from the various definitions of social capital:

> all concepts of social capital have in common the idea that trust and norms of civic cooperation are essential to well-functioning societies, and to the economic progress of these societies.

A number of researchers have associated social capital with growth. Growth can be improved in countries where social and political institutions protect property rights and discourage non-productive activities aimed at grabbing a large share of the social product (that is, what economists call 'rent seeking behaviour'). Such an environment creates a pro-investment climate and fosters entrepreneurship, thereby stimulating growth. Social capital can also stimulate growth by lowering the transaction costs associated with formal mechanisms, such as formal legal contracts and bureaucratic rules.[16]

Although there are a variety of determinants of social capital, from religion, education and ethnic polarization, a number of researchers have

argued that the vertical structure of government is an important determinant of social capital.[17] There are a number of reasons why the devolution of fiscal policy may improve social capital.[18] First, the basic economic (or, 'allocative') efficiency argument of the traditional fiscal federalism model should imply that a government's actions are more easily monitored by the local community and this should help to foster transparency and accountability in public sector actions. Hence the decentralization of fiscal policy should reinforce the perception of citizens that local governments respond to their needs and preferences faster and more effectively. That said this theoretical gain can only be realized if there is also a focus on allocative efficiency on the expenditure side.

Second, the decentralization of fiscal policy should lead to stronger links between community groups and between the community in general and government. With devolved policy making, local citizens are encouraged to take on more responsibility for social and economic development and discussions between the government and local communities tend to be greater. Again, it is easier to enforce social norms and contracts in smaller jurisdictions yet as devolution demonstrates it is not clear that local societal norms are more favourable to securing allocative efficiency, than those favoured by central government. The strengthening of these ties is likely to promote social cohesiveness, civic virtue, facilitate interactions among communities and discourage self-interest.

Third, closer government encourages community-wide participatory initiatives, such as the formation of groups, associations, and social/cultural activities among community members. Such civic cooperation can improve allocative efficiency if the total benefit to society of acting in a cooperative fashion outweighs the total cost of non-cooperative actions. Fostering this civic level playing field diminishes the pay-off for citizens to engage in free-riding behaviour and illegal or illegitimate activities, such as tax evasion, dishonesty and corruption.

De Mello (2000) seeks to test the link between fiscal federalism and social capital. He uses three social capital indicators: confidence in government, civic cooperation and associational activity for 29 market economies.[19] He 'explains' the level of these indicators using five measures of the degree of fiscal federalism. These are two revenue-based indicators – sub-central government tax and non-tax autonomy, two expenditure based indicators – the size and expenditure share of sub-central government, and vertical imbalances in intergovernmental fiscal behaviour (which measures the gap between sub-central government expenditures and own-revenue).[20]

The strongest and most significant relationship occurs for the vertical imbalances indicator which exhibits the appropriate relationship with respect to the different measures of social capital;[21] other indicators of

fiscal decentralization prove to be statistically insignificant across all three measures of social capital.[22] The findings are taken to support the subsidiarity principle of public finance, which in the traditional theory of fiscal federalism is justified in terms of allocative efficiency, that social capital can be boosted when local differences in needs and preferences are taken into account by policymakers.[23] For example, confidence and trust in government improves when the vertical imbalance is reduced. Since, as we have noted, there is an important vertical imbalance in the structure of fiscal policy in the UK this would seem to reinforce the case for greater tax devolution to Scotland.

In this chapter we have discussed the main theoretical considerations that face Scotland in designing an appropriate fiscal structure. Fiscal federalism – more tax devolution to Scotland than hitherto, is one choice; fiscal autonomy, a much greater degree of tax devolution, in the limit, all taxes raised in Scotland being retained by the Scottish Executive and Parliament, is another. Our attention is the next chapter turns to the economics of fiscal autonomy.

NOTES

1. *The Times*, 20 June, 2008, reports the Government Expenditure and Revenue Statistics (GERS) for 2006/2007. Thus, excluding North Sea oil tax revenues in that financial year Scotland had a budget efficient of ten billion pounds, while counting 83 per cent of North Sea revenues (Scotland's geographical share) Scotland was in an £800 million surplus.
2. See Tanzi (1999).
3. See Hines and Thaler (1995).
4. Stine (1994).
5. See Buchanan and Brennan (1980).
6. See, for example, Oates (1985), Grossman (1989) and Ehdaie (1994).
7. Breton quoted by Watts (1996).
8. This is the argument of Smart (2001).
9. See Oates (2004) and references therein.
10. See Perrson and Tabellini (1996) and Oates (2004).
11. See Perrson and Tabellini (1996).
12. See Oates (1993).
13. Various statistical studies support the notion that fiscal federalism promotes growth. These include Oates (1985), Bahl and Linn (1992), Thieben (2003) and Mankiw et al. (1992). See Chapter 9.
14. See Tanzi (2001).
15. See Fukuyama (1999).
16. The following authors stress the link between social capital growth: Abramovitz (1986); Rodrick (1998); and Knack and Keefer (1997).
17. See La Porta (1997) on religion; Heliwell and Putnam (1999) on education; and Fox (1996), on ethnic polarization.
18. The discussion here draws on De Mello (2000).
19. The data was originally collected by the World Values Survey for the period 1980–1 to 1990–1.

20. The estimation is conducted by regressing the three different measures of social capital onto the fiscal decentralization indicators and a set of control variables.
21. It is negatively related to both Confidence in Government and Associational Activity and positively related to Civic Cooperation.
22. The econometric results are shown to be robust to a sensitivity analysis.
23. Of course, these findings are suggestive rather than conclusive since the author has a limited data set in terms of its cross sectional and time series dimensions and also because the measures of social capital are rather crude and do not capture broader aspects of social capital.

4. Objectives of an effective fiscal federal system

In this chapter we consider key objectives of an effective devolved fiscal system, especially its principle characteristics. Since we are discussing a devolved system, the underlying assumption here is that Scotland remains within the United Kingdom, although we fully recognize that the political economy of the devolution of fiscal powers may be crucial to the attainment of the devolution of tax and other revenues to the Scottish parliament and this is something we consider later in the book. As we noted in our introductory remarks, there is a whole spectrum of different possible forms of fiscal devolution, with the current arrangements at one end and full fiscal autonomy at the other end of the spectrum. Although our own preferred system of fiscal devolution is closer to the latter, it is nonetheless important to look at a fiscal federal system which contains a number of the ingredients of fiscal autonomy although they are only midway on the fiscal devolution spectrum.

In a fiscal federalist structure the optimal system of financing subnational government will seek to achieve an 'appropriate' horizontally and vertically balanced financial structure; that is, to seek equity between regions in the United Kingdom, while also promoting financial and economic efficiency, and without undermining macroeconomic stabilization objectives.

The principal implication for Scotland of greater tax devolution is that it possibly faces a trade-off between the amount of financing that it receives from Westminster (under the equity between the regions doctrine that underpins the Barnett formula), in favour of stimulating greater allocative efficiency, with anticipated positive knock-on benefits for economic growth. By 'allocative efficiency' we mean efficient use of public funds and economic resources (such as capital and labour) in Scotland.

The main characteristics of a fiscal federal system may be summarized as:

1. expenditures and revenues being well matched through the devolution, assignment, and sharing of an agreed range of taxes;

2. appropriate intergovernmental transfer mechanisms are in place to ensure equity between the regions of the United Kingdom considerations are not sacrificed;
3. provision for an agreed regional borrowing capacity.

We will now consider each of these characteristics in more detail.

CHARACTERISTICS OF A FISCAL FEDERAL SOLUTION

Within the current devolution settlement many public goods are provided at the Scottish level and therefore their provision may already reflect the differing preferences within the Scottish community vis-á-vis the rest of the UK. However, appropriate instruments to match this expenditure are not devolved. The essence of the fiscal federalism argument (and more so the fiscal autonomy argument) is that there should be a link between the benefits of public goods and services and their price in the form of the tax raised to finance them. Since most key economic decisions are taken at the margin, we believe that one key element in any successful fiscal federalist solution is, at a minimum, that it should have taxation at the margin as an important component. This simply means that for any given fiscal settlement for Scotland, the ability to increase expenditure in one particular area has to be paid for either by a reduction in spending in another category or an increase in taxes. We call this the *marginal tax rule* (see also Macdonald and Hallwood, July 2004, p. 5) and discuss this in more detail in a Scottish context later in the book. We continue here setting out some nomenclature relating to taxation.

ASSIGNMENT, DEVOLUTION AND SHARING OF AN AGREED RANGE OF TAXES

An *assigned tax* is one whose proceeds are either shared between the different levels of government on the basis of derivation (that is, tax revenue is attributed to a particular geographical area where it was generated) or equalization tax revenue is allocated (on the basis of needs or resources). Heald (1990) notes that assigned revenues in a fiscal federal set up can contribute a sense of 'creating entitlement' to the revenues which he regards as 'very important aspect to the fiscal psychology of the relationship between devolved parliaments and the UK Treasury'.

A devolved tax is one for which the sub-central level of government

possesses the power to vary the base and/or rate at which that tax is levied. As we saw earlier, the key idea underlying a tax system in which revenue is either assigned or devolved to the sub-central government level is that it communicates to households and business units the cost of consuming different levels of local public goods and services. Theoretically, this should result in a more efficient allocation of these goods. The concept of needs equalization is also worth defining at this stage. Needs equalization:

> involves the attribution of tax revenue (and explicitly public expenditure) to particular geographical areas or units of government on the basis of criteria other than derivation (David Heald, 1990).[1]

The *tax assignment problem* refers to the determination of the vertical structure of taxes within a fiscal federation. There is vertical imbalance when revenues raised by sub-central government are considerably less than expenditure – requiring some form of subsidy from central government, as with the bloc grant received by Scotland from Westminster.

The key point in designing a vertical tax structure relates, as in the provision of public goods, to the issue of the mobility of economic agents, which is likely to be higher the more local the level of government. A good example of this in the Scottish context would be the number of households who use the services, such as art galleries and music, provided by Glasgow City Council but avoid the (property) taxes levied to pay for them by living outside the city boundary. Another example would be a higher rate of VAT in one region which could lead to various inefficiencies such as people engaging in unproductive travel costs to purchase the taxed items in lower-tax regions.

At a Scottish level, the ability to implement different expenditure taxes could produce distortions. For example, a higher rate of VAT in one region may lead to locational inefficiencies which can show up in various ways, such as agents engaging in unproductive travel costs to purchase the taxed items in lower-tax regions.[2]

Income Tax

The distorting nature of differential regional taxes, combined with labour mobility, on the face of it suggests in the context of a fiscal federalist arrangement that the Scottish parliament should perhaps avoid the differential taxation of labour – that is, personal income tax should not be devolved. However, as Oates (1999) points out, this is not necessarily correct. Rather, the Parliament should avoid taxes on mobile households

or firms which are not linked to any benefits, while taxing economic units for the benefits they receive from public services. By communicating to taxpayers the cost of consuming local public goods should result in an efficient allocation of these goods. So some devolution of income tax under a fiscal federalist tax devolution solution may well be appropriate, as is indeed the case at the moment in Scotland.

Natural Resource Taxes

In the fiscal federalist literature, natural resource taxes are usually not seen as a suitable candidate for a local government tax since the base for these is usually unevenly distributed across regions. It has also been argued that the extraction of profits (or 'economic rent'), from natural resources should be the prerogative of the nation state and for the benefit of the whole nation.[3] It is often argued that the key reason for not devolving natural resource taxes under a fiscal federalist arrangement is the potential volatility of the price of the asset would make revenue forecasting difficult. However, the actual experiences in countries which have federal structures (that is, the US and Canada) is that the devolution of the revenue from natural resources is important for the sub levels of government (Alberta and Alaska) and actually they avoid the potential volatility of the price of the resource by creating an oil fund, which has also of course worked very well for independent countries, such as Norway.

Customs and Excise and Local Purchase Taxes

Customs and excise taxes and local purchase taxes are usually not regarded as suitable for devolution, because it is undesirable to have rates differing dramatically between regions which for one thing can produce the travel inefficiencies problems referred to earlier.

Minor Taxes

Other minor taxes such as betting tax, stamp duty, vehicle licence, business licence taxes, TV taxes and various types of user fees for local services could all potentially be devolved to the Scottish Parliament (as they are in some other countries). Property taxes are also well-suited for devolution and they, of course, have also been already devolved in the case of non-domestic rates to the Scottish Parliament[4] and in the case of Council Tax to the lowest tier of sub-central government, local government across the UK.

As we see it, there is no reason why the key taxes discussed in this section about a fiscal federalist arrangement even if not devolved, should not be *assigned* to sub-central government and this could represent the major revenue source for the Scottish parliament. But it is important, for the operation of the marginal tax rule – increased spending at the margin being matched by increased taxes or reduced expenditure in other areas – that some form of tax devolution occurs.

Non-Benefit Taxes

When the central government or sub-central government levies taxes that are designed to reflect the benefits derived from a public good or service, they are referred to as benefit taxes. Non-benefit taxes are necessary for the redistribution of income. Non-benefit taxes can be distorting because sub-central government ignores the effect on the rest of the system. These inefficiencies include the exporting of tax burdens, external congestion effects and equity issues that are associated with a regressive pattern of tax incidence. If local levels of government levy non-benefit taxes, they should be in the form of resident-based taxes rather than source-based taxes as this is seen as lessening tax-induced distortions by reducing the scope for tax exporting. There is also a presumption for taxation of relatively immobile economic units. Since land is the most immobile economic factor and in inelastic supply, unimproved land has been suggested as a source of tax as it would not produce locational inefficiencies. Such taxes will simply get capitalized into local land values.[5]

Tax Base Issues

Although it is an alternative way for a sub-central government to raise revenue, there is a general presumption in the fiscal federalist literature against allowing sub-central government units control over the tax base. The traditional arguments against devolution of the tax base is that there are significant costs of administration, significant fixed start up costs and also that it is likely to impart a distortionary bias into the overall national tax structure. On the cost aspect it may well be that the information technology revolution has reduced (perhaps greatly) the costs of administration. Start-up costs are likely to be significant, although it should be recognized that these are static one-off costs and may be dominated by the gains – both static and dynamic from devolving the tax base. Furthermore, it is not entirely clear to us that the distortionary aspects of different tax bases are any different to the potentially distorting effects of different rates of tax. Experience in the US certainly suggests that tax base devolution can be made to work.

Intergovernmental Transfer Mechanisms

Intergovernmental grants can have three roles in a federated tax system:[6] fiscal equalization across regions, improving the functioning of the overall tax system, and, internalizing the spill-over effects to other regions. The theory suggests that to limit spill-overs from one region to another, *conditional* grants should be used to finance a proportion of the sub-central government expenditures. Conditional grants can take the form of matching grants, non-matching grants for specific purposes and bloc grants. Conditional grants are designed to alter local priorities to take account of central government preferences and there is a literature which shows that the optimal degree of matching grant rate is the one which induces the sub-central government to provide the socially optimal level of service.[7] Such conditional grants are currently not part of the fiscal set-up in the UK, although it would be necessary if components of expenditure with important spill-over effects were to be devolved.

The objective of fiscal equalization ('horizontal equity') is usually thought to be best achieved through the use of *unconditional* grants. These transfers are usually based on the 'fiscal need' and the 'fiscal capacity' of each region, so that regions with a high fiscal need-capacity ratio will receive a large transfer from the centre. Scotland may have a higher fiscal need due to its poorer health record and the greater geographical dispersion of its population compared with the rest of the UK. Unconditional grants are thought to produce a higher level of utility because this kind of grant simply increases regional income without affecting local spending priorities (which are determined by local preferences). The theoretical literature suggests that unconditional grants should be lump sum in nature and not influenced by the actions of recipient governments. Otherwise the system can degenerate into a system of 'gap filling' (grants made simply to meet the deficits of sub-central governments) which conflicts with the objective of disciplined expenditure policies. However, this literature does not give any indication of the appropriate size of these grants and how they are formulated.

Matching grants have also been advocated for the achievement of the objective of fiscal equalization. For example, if the objective of the tax framework is to equalize taxable capacity, the centre may decide to supplement the revenue of the poorer region by matching the revenues raised in that region by some stated percentage. The big advantage of this kind of system is that it allows all regions to raise the same tax per capita for a given tax rate (irrespective of the size of their tax base).[8]

The equalization of intergovernmental grants from central to regional government is not a necessary feature of fiscal federalism.[9] For example,

such transfers inevitably have the perverse effect of transferring some income from poor individuals who are located in the wealthy region to wealthy individuals located in the poor region. Equalization grants play a major role in a number of countries that have a form of fiscal federalism (for example, Australia, Canada and Germany) but not in others (for example, the United States).

A further issue is whether there is also efficiency as well as equity arguments for fiscal equalization. For in the absence of such grants, richer regions can use their position to promote continued economic growth, some of which comes at the expense of poorer ones.[10] In this context, fiscal equalization creates a level playing field for the different regions. It can be argued however, that such grants can impede efficiency because they prevent necessary adjustment occurring at the regional level.[11] In particular, they are seen to impede the development of the poor region by preventing the necessary resource flows – especially of people, taking place.

Borrowing Capacity

Macroeconomic stabilization can be an argument against tax devolution – a central government would lack some leverage over its budget deficit, and this leverage can be regained in a devolved system through coordinated fiscal action between central and sub-central government. For a fuller discussion see Chapter 8.

The redistribution function of central government can also be used in an argument against fiscal devolution as the latter also reduces central government leverage. But to be realistic about this it is hard to argue that interregional income redistribution has ever been much of a priority at Westminster – except in the cases of using public money to reduce the influence of the IRA and its political arm and the Scottish Nationalists. As we pointed out earlier, it is hard to find any correlation between per capita government regional spending and regional per capita income.

One way in which regions can supplement their revenue is by borrowing. There are four models of how sub-central government debt accumulation is disciplined: market discipline, 'collegiate' administrative discipline, rules based discipline and borrowing targets set by central government.[12] But, as we shall see in Chapter 8, none of these are perfect.

How does the fiscal federal solution stack up in terms of the key trade-off between efficiency and equity introduced in Chapter 1? The current fiscal settlement for Scotland, based largely on the Barnett bloc grant settlement, fails miserably on this criterion in that nearly all of the emphasis is on the equity side of the equation and nearly none on the efficiency side. A fiscal federalist solution dramatically alters the trade-off and sharply increases

the efficiency element for the public sector and this will occur even if the bulk of taxes are merely assigned, as is usually the case in a fiscal federal system. Equity may be compromised in a fiscal federal system although this is by no means clear cut and would depend very much on Scotland's putative fiscal surplus or deficit. Since the macroeconomic stabilization function is likely to be very similar under both the current system and the fiscal federal alternative we argue that the fiscal federal proposal discussed in this chapter is unambiguously superior to the current arrangements. What is not clear here is whether the fiscal federal outcome is superior to the fiscal autonomy alternative, which we discuss in Chapters 6 and 7. One of the key aspects that the latter proposal addresses is the private sector efficiency aspects of a fiscal settlement and it also automatically provides a hard budget constraint, a factor which may be lacking under fiscal federalism and which we believe is absolutely crucial to the design of an effective fiscal system.

NOTES

1. 'Derivation involves the attribution of tax revenue to particular geographical areas or units of government on the basis of where that revenue was generated' (Heald, 1990).
2. Devolution of VAT to sub-central government is an aim of some political parties in Italy. The Northern League is reported as wanting to retain 90 per cent of tax revenues generated in Lombardi. Similarly, the Movement for Autonomy (of Sicily) wants to tax and retain the revenues from oil refined in Sicily no matter where it is sold. Berlusconi's party (Popolo delle Liberta) has endorsed a bill recently approved in the Lombardia region. Under the bill each Italian region would keep 80 per cent of revenues from VAT generated therein, 15 per cent of the income tax and all the revenues from taxes on oil, tobacco and gambling. The bill also proposed devolving a number of programmes funded at the national level to local administrations, limiting how much redistribution can occur across regions. See *Financial Times*, 21 May 2008, 'Three big challenges for the Berlusconi cabinet'.
3. See Norregaard (1997).
4. In particular the non-domestic rate is set uniformly by the Scottish parliament and pooled centrally across Scotland to equalize for different tax bases.
5. For more details on these particular matters see Gordon (1983).
6. See for example Oates (1999).
7. That is, where the marginal social cost is equal to the marginal social benefit (Boadway and Hobson, 1993).
8. In the US this has been used to achieve equity across states for school finance and is referred to as 'power-equalization'.
9. As stressed for example by Oates (1999).
10. Oates (1999).
11. This argument is made by McKinnon (1997).
12. This characterization is based on Ter-Minassian and Craig (1997).

5. Fiscal federalism: a Scottish perspective

In this chapter we give an example of what a fiscal federal structure might look like for Scotland using data extracted from the Scottish Government's publication Government Expenditure and Revenue (GERS). This chapter draws on our contribution to the Allander series in which we were asked to consider what a fiscal federalist structure might look like for Scotland. In that paper the latest data we had access to was for the period 2001–02, and we showed what Scotland's spending, revenue and estimated fiscal balance would have been for that period. Here we supplement these figures with the most up-to-date numbers using the 2008 GERS estimates for revenue and expenditure. Although our preferred structure of fiscal devolution is toward the fiscal autonomy end of the spectrum, we think the system proposed here may be of interest to people who would like to see a midway house on the spectrum of fiscal devolution. We start by giving a brief overview of the current picture with respect to taxation and spending in Scotland. We then go on to present a sketch of what a fiscal federalist system might look like for Scotland, based on the arguments made in previous chapters. We discuss the fiscal federal choices for Scotland around the three key dimensions, namely:

- revenue raising issues;
- the design of a grant system;
- the borrowing options.

We set the scene by outlining the current Scottish position.

THE SCOTTISH POSITION

Spending

Under the Scotland Act (1998) various expenditure functions have been devolved to Scotland, mainly in the areas of education, health, agriculture, economic development and transport, environment, law and home affairs, and social work and housing. Reserved matters are retained by

Westminster and include defence, employment, financial and economic matters, social security and international relations. In terms of our previous discussion, this division appears to be rational as expenditures on reserved items yield UK-wide benefits and might also enjoy economies of scale. Moreover, the benefits generated by devolved expenditures are probably more localized, and as we argued earlier, local polities are likely to be better placed to identify potential benefits than is distant central government. It is economically rational that sub-central government should be in charge of these expenditures.

In the exercise conducted in Hallwood and MacDonald (2006) for the period 2001–02, total expenditure in Scotland (both identifiable and non-identifiable) was £39 billion and net receipts excluding North Sea oil were £31 billion, leaving a net borrowing for the period of £8 billion which amounted to a deficit, which is 10 per cent of Scottish GDP. However, if all of the revenue from North Sea oil were to be apportioned to Scotland the gap between revenue and expenditure falls to £2.8 billion (or 2.8 per cent of GDP). Alternatively, if 33 per cent of North Sea oil is included the deficit is £6.4 billion, or 7.4 per cent of GDP, while if 70 per cent is included the deficit falls to £4.4 billion or 4.7 per cent of GDP (see GERS, 2003).[1] For the period 2006–07 – the most up-to-date at the time of writing – the estimate of total spending on current and capital accounts was £49.9 billion and total revenue excluding North Sea oil revenue was £42.4 billion and with a geographic share of North Sea oil revenue the figure rises to £49.9. The 2008 edition of GERS produces estimates of the fiscal balance contingent on whether capital expenditure, regarded as investment spending, is included in the numbers or not. Excluding capital expenditure – which is the norm in most countries – gives a small fiscal surplus of £0.8 billion or 0.7 per cent of GDP. If capital spending is included the fiscal position turns to a deficit of 2.1 per cent of GDP. Neither of these figures would prevent Scotland having a fiscal devolution settlement along the lines discussed in this book. Clearly, the non-oil figure for the deficit given in one of our 2006 papers is rather large, but since there were many anomalies and uncertainties with respect to the apportionment of spending and even revenue items, as discussed in GERS (2008), that figure is likely to be inaccurate, especially given the variability of oil prices at historically high nominal and real levels.

FISCAL FEDERALIST ALTERNATIVES TO THE BARNETT FORMULA

What does the forgoing theoretical analysis and comparative study suggest would be a workable degree of fiscal federalism in Scotland? – assuming,

that is, that fiscal autonomy, considered in the next chapter, is not the choice. Our discussion here is by no means intended as the last word on this issue. Rather, it is meant to contribute to the ongoing debate over the most suitable federalist package for Scotland, if that be the chosen system, based on economic criteria.

It should be emphasized that thinking about how to implement fiscal federalism is rather more complicated than thinking about how to implement fiscal autonomy. This is because a fiscal autonomy model has fewer variables to think about. Not that fiscal autonomy within the UK is a cut and dried issue as details would have to be worked out about things such as how to separate the Scottish tax system from that of the rest of the UK; how to divide North Sea oil and gas revenues; whether any residual needs equalization grant would continue to flow to Scotland; and how large would be the size of Scottish payments for public goods, such as national defence, supplied by Westminster.

But a fiscal federalist solution involves resolving many more details than these. For example, what taxes would be devolved; would Scotland have control over just tax rates, tax bases, or both; and would limits be placed on the degree of tax variation allowed? And there is still the issue of the size of a 'reformed' needs-related bloc grant after fiscal federalist tax devolution was introduced. We now return to a further examination of fiscal federalism, specifically the issue of tax assignment.

A POSSIBLE TAX ASSIGNMENT MODEL

What might a fiscal federalist system look like for Scotland? We are guided here by the fiscal federalist experience of some other countries in producing a mid-way approach between the two extremes of full autonomy and the status quo. In other words, in a fiscal federal set up there is a balance in the trade-off between allocative efficiency and equity.

Such a system would be one that delivers:

- a better balance between the horizontal and vertical aspects of fiscal policy;
- trading off some equity in favour of stimulating greater allocative efficiency.

The improvement of allocative efficiency relates to the matching of the costs and benefits of different expenditure categories and also efficiency gains in public spending.

This could be achieved by a system that:

- extends the assignment of an agreed range of taxes and the devolution of a further range of taxes;
- preserves a significant equalization grant to ensure equity considerations are not sacrificed, in line with good practice across the globe;
- provides for an agreed regional borrowing capacity.

Our intension here is only to focus debate on some of the important economic issues which could underlie the further evolution of the current financial settlement – we are not offering a blueprint. Below we try to sketch out the parameters of the choices for Scotland and the UK against each of the dimensions outlined above.

Vertical Imbalance

How may the vertical imbalances which exist within the UK be addressed in a fiscal federal set up? In trying to answer this question it is worth at the outset listing the full spectrum of choices available:

1. Devolve a particular tax, which gives the devolved authority the ability to vary the base and the tax rate;
2. Devolve a particular tax, which gives the devolved authority the ability to vary the base but not the tax rate;
3. Devolve a particular tax, which gives the devolved authority the ability to vary the tax rate but not the base;
4. Assign a share of a tax on a derivation basis and give the devolved authority the right to vary the base and the rate;
5. Assign all or a share of tax on a derivation, or other basis, and give the devolved authority the right to vary the rate but not the base;
6. Assign all or a share of tax on a derivation, or other basis, and give the devolved authority the right to vary the base but not the rate;
7. Assign all or a share of taxes and equalize on a population, expenditure needs or tax capacity basis, without right to vary the tax rate or base.

Assigning and Devolving Taxes

Even assigning more tax revenues, without any actual devolution of either tax rates or bases, would in itself represent a step in the direction of fiscal federalism and a hardening of the budget constraint faced by the Scottish Executive and Parliament. The fact that the revenue share was coming to Scotland would create an incentive to politicians to engage in policies which are growth friendly, especially if the tax take is related to the income

in Scotland. This would of course be reinforced if taxes were also devolved and we have argued for this in terms of the fiscal federal marginal tax rule.

Value Added Tax

Heald (1990) notes four alternatives for the assignment of VAT. The proportion assigned could depend upon Scotland's proportion of VAT-able final consumption, or upon a regional analysis of where the value added accrued. Alternatively, assignment could be on the basis of a uniform per capita or per adult basis. The advantage of the latter proposal is that they would assist equalization between the regions. Heald (1990) opts for a per capita basis because it is simple to implement and would involve fewer technical controversies than the first pair. We, however, favour linking VAT to final consumption since that would provide a link between tax revenue and economic activity: the higher the economic activity the more revenue is generated for the local polity.

Income Tax

Income tax seems equally suited to assignment and also has the potential to be devolved in a fiscal federal solution. Indeed, under the current devolution settlement there is already the possibility to alter income tax by ±3 per cent. So far this has not been used, although on the principle of making households pay for the benefits of higher levels of public expenditure, tax rises could be used to satisfy the demand for higher levels of public expenditure. Some commentators have argued that the amount is essentially insignificant because it represents a very small proportion of total expenditure and taxes. We would argue on the basis of the experience in other countries, particularly Belgium and Denmark, that a wider discretionary band could work. In particular, the kind of variability of income tax, in Belgium, where the regions are allowed to vary their rates by approximately ±7 per cent would be more appropriate or perhaps the even more bold option of no bounds on the bands should be the objective. As we have argued previously although labour is usually thought of as a mobile economic unit, there are reasons why variations may be advantageous.

Upward variation of income tax gives the Government scope to, say, communicate the benefit-cost trade off mentioned earlier to the electorate: if households in Scotland want to spend more on, say, health and do not want to reduce spending on other areas they have to pay for this in terms of higher taxes. This is our *marginal tax rule* in a fiscal federal system.

Although there may be some outward migration of labour from Scotland as a result of this, the point is if this is the policy choice of the electorate they should have that choice. However, we believe in the UK case the outward migration of labour as a result of not too great tax increases is likely to be relatively small. For one thing labour, in contrast to capital, has 'emotions'. There would appear to be a strong sense of belonging, or home bias, in the regions of the UK. This shows up in people in Scotland, and indeed in other parts of the UK, wanting to stay near their family/roots rather than moving to some other region where taxes are more advantageous. Of course this argument would only apply to those in employment or who have their aspirations satisfied in their current job.

Another possibility – that takes account of the possible failure noted above of the Scottish polity quickly to latch on to the link between designing an efficient tax system, faster economic growth and a growing tax base – is to have an asymmetrical tax-variation band. For illustrative purposes, this could be +3 per cent (as with the 'tartan tax') with no downside limit at all. The upside limit could act as a restraining device for a future Scottish government from an over-exuberant tax-and-spend, or borrow-and-spend policy.

The ability to cut income taxes could also be used for a policy of matching benefits and costs but we think there is likely to be an important asymmetry in the case of a tax cut with respect to the movement of labour. This is because tax cuts may well attract expatriate Scots back to Scotland if similar jobs are available in Scotland compared to their current location. This kind of policy may help solve, at least in part, the population deficit that Scotland may face (see Wright, 2004) and its implications for economic growth.

Corporation Tax

In principle, corporation tax is similar to income tax and would therefore seem a natural candidate for assignment. An argument can also be made for devolving corporation tax powers as well. Clearly, though, for a small open economy, and given the mobility of capital, tax movements in an upward direction could lead to a rapid movement of capital (presumably in the form of locational headquarters) from Scotland to the rest of the world. Some commentators have argued that, as in the case of income taxes there may be an important asymmetry here, in the sense that cuts in corporation tax could lead to an inflow of capital which, in global terms, would be minimal, but in Scottish terms could be highly significant. The evidence from the Canadian provinces suggests that such a policy can be successful within a federal structure and that such tax competition does not

produce a race to the bottom.[2] Although this policy would seem to have been pursued successfully in Ireland, and the new EU members Estonia, Hungary, Latvia and Poland all have corporation at less than 20 per cent, there exists a debate about the suitability of such a policy for Scotland.[3] So although corporation tax is well-suited to assignment in a federalist settlement it is not clear how much scope there is for the devolution of this tax in a fiscal federalist structure (i.e., one short of fiscal autonomy).

Customs and Excise Duties

Customs and excise duties are usually not regarded as suitable for devolution in a fiscal federalist settlement, because it is undesirable to have rates differing dramatically between regions which for one thing can produce travel inefficiency problems referred to earlier. However, these kinds of taxes are likely to be amenable to assignment. Taxes which are better suited for devolution are likely to be betting tax, stamp duty, vehicle license, business license taxes, TV taxes and various types of user fees for local services. Property tax, already devolved, is also likely to continue to be a good source of devolved revenues.

In sum, this approach to the devolving of tax powers to the Scottish Executive is one which emphasizes assignment rather than full devolution. In terms of income tax, the experience of other countries suggests that it would be worth giving consideration to the devolution of tax bases as well.

Balanced Tax Assignment

Assignment of taxes is quite common in other federal systems and this generally involves assigning some proportion of the tax raised in a particular region. Here we suggest some proportions which help to illustrate the amount of revenue that would be generated on the basis of the latest 2006–07 GERS figures published in 2008. The choice of these proportions is not intended as definitive. In broad terms, we believe it important to have a matching, or balance, between identifiable expenditure and assigned (total) tax revenue and our example here is one way of achieving this. We refer to this as a *balanced tax assignment*. Since economically rational decisions are most likely to be adopted when decision makers have to balance the benefits of particular spending decisions with the costs of these decisions, we believe that balanced tax assignment is an important element in achieving this, while at the same time recognizing that a Scotland in the Union has to contribute to expenditure made by Westminster, on items such as social security and defense.

We recognize that there may be other ways of matching revenue with spending and so in that sense we would not defend our chosen weights as being the last word – they are for illustrative purposes. Assuming that 100 per cent of revenue raised in Scotland for both income and corporation tax was given back to the Scottish government, in the form of devolved and assigned revenues, this would produce revenue streams of £10 338 million and £3109 million, respectively (on the basis of the GERS 2008 figures discussed above – the figures relate to the period 2006–07). Assuming all VAT revenues were assigned this would produce an additional income of £7449 million and assigning the duties on fuel, tobacco and customs duties produces an additional £3707 million. Taking a package of minor taxes (namely Stamp duties, Betting and Gaming duties and Vehicle excise duties) results in a further £1500 million of revenue.[4] This produces a grand total of £26 103 000 which represents over one-half of the total identifiable expenditure made by the Scottish Government in 2006–7 (£43 134). This kind of general approach would go a long way to addressing the vertical imbalance that currently exists in the relationship between the Scottish Government and Westminster and that imbalance would be further reduced if the geographical share of North Sea oil was included, which would give a grand total of £34 000 million.

Marginal Spending Decisions

However, although the assignment of taxes is an important step towards fiscal decentralization we believe that it is important from any initial starting point that Scottish policy makers are challenged in their marginal spending decisions. So from a starting point where some proportion of taxes have been devolved and a bloc grant has been issued (see below), some mechanism has to be in place which forces the policymakers to operate a cost–benefit analysis with respect to additional expenditure and the method we propose is our *marginal tax rule*, introduced earlier: if the policymaker decides to spend an extra £100 million on, say, health, either expenditure has to be cut elsewhere or taxes have to rise. We believe the devolution of certain taxes – namely income tax and a package of minor taxes – will achieve this.

Smaller Bloc Grant

If a fiscal settlement for Holyrood based on tax assignment/devolution produced a fiscal deficit (that is, an excess of expenditure over revenue) for Scotland (and as we have seen the latest GERS numbers suggest that this may not be the case depending on how North Sea oil is handled). In

order to deal with the horizontal imbalance resulting from this assignment an unconditional lump sum bloc grant which is determined on the basis of a needs assessment exercise at the time of the move to a fiscal federalist system may be justified.

However, experience in other countries suggests that this is not a straightforward exercise and it is likely to be an especially tricky issue in the UK context since it is the first time such a decentralization of fiscal policy has taken place. One way of addressing this issue, which would have a smoothing effect around the transition, would be to have a lump sum bloc grant derived at the time of the changeover to the new system set at a level to achieve total revenues equal to Barnett and which could then converge to the new needs assessment level over time. At least in the short run there is a case to have in place a mechanism to protect the lump sum grant if the Scottish polity does indeed succeed in raising economic growth/efficiency and the overall tax take. The idea is that in order (a) to promote greater tax efficiency and (b) to reward Scotland for taking on more risk, Westminster would need to realize that in the longer term the UK budget benefits from tax devolution to Scotland and that it needs to leave an incentive in place for the Scottish polity to create greater tax efficiency in Scotland (and hence the UK, Scotland being a part of the UK). That is, Westminster should not, at least in the short run, cut the lump sum grant as Scotland becomes more efficient in raising tax. In this regard it may be advantageous to follow the Spanish system and review the fiscal structure on a regular basis (five yearly in the Spanish case). If there still exists a fiscal deficit in Scotland after the application of a bloc grant, further attention might have to be focused on how to raise additional tax revenues. If surcharges on existing income and expenditure are ruled out, study of practices in other countries would be fruitful, especially a study of how control of the tax base may be used to increase total tax revenue.

Macroeconomic Stabilization

If Scotland remained in the Union overall macroeconomic stabilization would remain with the central UK government. With a centralized social security system there is already an automatic stabilization effect: a recession in Scotland relative to the UK is attenuated by reduced transfers from Scotland to the centre and increased transfers from the centre to Scotland (this is the risk sharing aspect of stabilization from the centre). Could there be an additional discretionary role for the local government to stabilize the economy? The correlation between regional business cycles in the UK is not perfect. Paul Krugman (2003) has suggested that this would not be a useful way of using fiscal federalism in Scotland, essentially because it does

not seem to have worked in other countries such as the USA. However, in the USA the constitutional arrangements by-and-large require states to balance their budgets on an annual basis which may explain why regional countercyclical policies have been unsuccessful. Although we recognize that the management of a limited countercyclical policy represents an important challenge for a small open economy operating within a monetary union, we do think having the flexibility to engage in such a policy would be useful, especially in the presence of asymmetric shocks which are known to be temporary in nature.[5] Clearly such a policy would not be well suited to dealing with permanent shocks. Allowing a role for some stabilization, and given the move in the fiscal federalism case away from equity to efficiency, might also mean the Scottish Government would wish to generate alternative sources of revenue.

Borrowing

One source would be borrowing. One of the anomalies of the current devolution settlement is the fact that local authorities seem to have a greater degree of fiscal autonomy than the Executive. They have a facility to borrow in times when they face temporary falls in revenue. One possibility for Scotland would be some kind of Scottish Loans Fund (which would essentially entail borrowing from central government). Additionally, or alternatively, the Scottish Government could also borrow from the commercial banking system. Borrowing could also be envisaged for capital investment through a Scottish Loan Fund, and from issuing securities for which there are precedents in other countries, such as Canada.

Word of Warning

While we are rather persuaded by the theoretical and empirical evidence (Chapter 9) that tax devolution would work in the direction of improving efficiency in the fiscal system – so promoting allocative efficiency – a degree of caution should be reiterated. It has to be recognized that how quickly the benefits from addressing this vertical imbalance appear rather depends on how the politicians in Holyrood respond to their new budget constraint. If they quickly come to recognize a strong interrelationship between spending and taxing, allocative efficiency may also quickly improve. However, this is not guaranteed because in practice politicians may either not understand or strongly discount the effect of their spending decisions on the level of taxes. If so, the effect of the new budget constraint on government spending will be slow in appearing. In the former case – insightful politicians – the efficiency–equity trade-off is likely to be rapid,

with some equity being given up in exchange for greater efficiency in spending and taxing. However, if politicians take years to recognize the new budget constraint, some equity will have been given up without much, if any, increase in efficiency. In a sense, therefore, success in the efficiency–equity trade-off in part depends on educating a majority of the Scottish polity into understanding the spending–taxing implications of a budget constraint of having to raise the bulk of tax revenues in Scotland. Tanzi (2001) emphasizes the importance of having the relevant institutional framework in place before the process of decentralization actually takes place:

> the conclusion must be that, if decentralization is an important political objective for a country and if that country can establish institutions that will make decentralization work with a reasonable degree of efficiency (institutions related to tax administration, expenditure management systems, budgets, and so forth, but especially institutions that allow the central government to transfer resources to subnational governments with some assurance that these resources will be used effectively for the purposes for which they are passed on, and without creating expectations for the local governments that if they spend more, they will be bailed out by the national government), then fiscal decentralization can be a good policy.

The above position contrasts with that held by some World Bank experts who argue that once decisions have been made to engage in greater fiscal decentralization, the sub-national government will be stimulated to create the needed institutions and to modify the existing incentives for policymakers to ensure the policy of decentralization is a success.

NOTES

1. These numbers are calculated using an oil price of US$18 per barrel.
2. However, most commentators would argue that the reason it works in Canada is simply a function of the physical size of the regions – they are very large, able to absorb the differentials and, of course, all have the ability to alter corporation taxes. Norregaard (1997).
3. See Alexander (2003) and Krugman (2003). New EU members: see *The Economist*, 'Dancing an Irish jig', 15 April 2004.
4. Of the minor taxes mentioned earlier these are the only ones for which revenue data is available through the 2008 GERS statement. This figure could therefore be larger if other minor taxes were included and also if changes in the rates of these taxes were permitted.
5. Although we don't have empirical evidence on this for the UK, it is known that in Latin America at least that almost all macroeconomic shocks are temporary in nature (Hallwood et al., 2005).

6. The case for Scottish fiscal autonomy

In this chapter we discuss the tax, public spending and economic implications for Scotland of fiscal autonomy. By 'fiscal autonomy' we mean that Scottish Government and parliament spending would be funded by taxes raised in Scotland or through public borrowing by a Scottish Treasury. Revenue transfers to Scotland under the Barnett, or some other bloc grant, formula would cease; or, at least, would be much reduced. Moreover, to the extent that Scotland benefited from public goods provided by Westminster, Scotland could even pay a levy to Westminster.

We discuss two types of fiscal autonomy: (a) within the UK and (b) Scotland as an independent country. With independence, Scotland would gain the ability to issue its own currency, or it would have the freedom to adopt the euro and would be able to vary and have differential VAT rates, which has been used by Luxembourg to a great extent to build its financial sector; otherwise we do not believe the economic benefits of fiscal autonomy to Scotland would differ significantly between the two constitutional arrangements.

We continue with the argument that the current bloc grant system is inefficient because it does not require the Scottish Government to balance the benefits of public spending against the pain of financing and it can only be used in a limited way to affect incentives of private sector agents. With deficient incentives political decision makers are unlikely to strive to increase efficiency in the provision of publicly provided goods, or to try to get the right balance between provision of goods and services by the Scottish public and private sectors, or to promote economic growth in Scotland. Moreover, as the tax burden caused by the incentive and spending deficiencies in the Scottish public sector is not readily apparent to the Scottish electorate, the electorate has little inclination to discipline its elected representatives.

If fiscal autonomy were introduced, the ability to alter competitiveness and comparative advantage in the private sector would be available to policymakers and incentive structures for both the Scottish electorate and its representatives in Holyrood would change radically. In terms of the latter, we would expect that matters such as value for money in public

spending, balancing public spending with its costs in terms of higher taxes, and promotion of economic growth would be given much greater emphasis than under the present incentive system. However, we have already offered a word of warning that fiscal autonomy within the union, offering as it would a harder budget constraint and potentially improved resource allocation, might not be without costs. These costs could come in terms of a reduced ability to deal with interregional equity issues, and reduced effectiveness of macroeconomic automatic stabilizers in the Scottish economy. By the latter we mean that variation in cushioning net tax flows from Westminster to Scotland as economic activity in Scotland varied with the business cycle would be much reduced, or, perhaps, eliminated. Of course, an independent Scotland, with its own fiscal autonomy, would face the same two issues – reduced fiscal flows from Westminster addressing the 'equity within the union' issue, and increased responsibility for the Scottish government to stabilize the Scottish economy as economic activity in Scotland varied with the business cycle.

BACKGROUND AND SOME POLITICS

In the last two chapters we argued that a range of taxes (but not all) currently under the control of Westminster could be devolved to the Scottish Government and parliament under a system of fiscal federalism in the UK. The Steel Commission Report (2006) is broadly in agreement with us, and we find ourselves in agreement with many of its arguments. However, there is one thing in particular to which we take exception. This is its dismissal of fiscal autonomy – all spending and taxing being devolved to Scotland, as a mere political step on the road to an independent Scotland. While the thinking of the Steel Commission on this matter is largely driven by political considerations, we think that the economics of fiscal autonomy deserves examination. Indeed, the three Unionist parties in Scotland – Labour, Liberal-Democrats and Conservatives – have lately come around to the view that some form of fiscal devolution is desirable and this is one of the key areas of remit of the Calman Commission. Indeed, in September 2008, Prime Minster Brown has acknowledged that some form of tax devolution to Scotland is desirable.[1]

The main thing that becomes apparent is that fiscal autonomy is like fiscal federalism but more so! By this we mean that the economic incentives created by fiscal autonomy, for both the Scottish electorate and its elected representatives in Holyrood, are even clearer than under fiscal federalism because these Scottish entities would have to bear the full tax cost of every last pound of Scottish government spending. This hard budget constraint

is not quite so hard under the fiscal federalism we discussed in the last chapter because we envisaged some fiscal transfers from Westminster continuing. With fiscal autonomy this would no longer necessarily be the case. Indeed, Holyrood might make transfers to Westminster in payment for public goods (such as defence) supplied by the Union as a whole. It is also true, as pointed out by the Steel Commission, that fiscal autonomy would put an end to equity transfers – aimed at equalizing tax burdens as a percentage of per capita regional incomes. But from a Scottish point of view, this would not be such a disadvantage, especially if North Sea oil tax revenues persist at recent high levels.

One of the key issues addressed in the last chapter is that the design of an effective and credible fiscal federalist arrangement relies crucially on ensuring that a hard budget constraint is in place when fiscal powers are devolved. If such a constraint is not in place, or if it is in place but it is easily circumvented, the fiscal federalist settlement will not achieve the essential disciplining of politicians, although it may still achieve other objectives of fiscal devolution. Our argument in this chapter is that fiscal autonomy automatically provides a hard budget constraint and on this score it is therefore a superior form of fiscal devolution to fiscal federalism. In essence in a fiscal autonomy arrangement the market – particularly the capital market – provides the hard budget discipline, rather than an institutional or legal arrangement.

We would also like to comment on the advantages of fiscal autonomy adding to the democratic process in both Scotland and the Union. We think that the Scottish electorate is intelligent enough to know and to vote its preferences. A new system of fiscal autonomy would be one thing, independence from the Union quite another. As fiscal autonomy would mean devolving more taxes to Scotland than would a system of fiscal federalism, we think that fiscal autonomy in a meaningful sense is the more democratic, at least from the perspective of local democracy. The promotion of the latter we observe is becoming of increasing interest in the UK in recent years.

A similar 'democracy argument' can also be used against those who would retain the present bloc grant system as a bastion against tax and spend socialist politicians who, it is thought, would use new powers over taxes simply to raise them. But, again, this is a matter for the electorate who has the power of the ballot box to choose the politicians it wants. A word of warning though: it could be that neither the electorate nor the elected politicians get it; namely, that fiscal autonomy imposes serious constraints on public spending. An initial dive into overspending, overtaxing and overborrowing is a possibility. This sort of thing happened in some Canadian Provinces when they were given greater fiscal freedom in

the 1980s. It took them about a decade before they grew into their new fiscal responsibilities. But is the possibility of fiscal mismanagement a good reason not to argue for fiscal autonomy for Scotland? If it is, it is tantamount to accepting that in fiscal matters Scotland has to be saved from itself by England!

THE ECONOMIC CONTEXT

A succinct statement of our main argument is that the current large gap between spending by and taxes raised through Holyrood – what we have referred to above as 'vertical imbalance' or 'fiscal mismatch' (and financed through the Barnett formula) – is inefficient because it does not provide sufficient incentives for Holyrood to make efficient use of its public revenues. The thrust of research on public finance is that decision makers (the Scottish electorate as principal and its agents the Scottish Government and Parliament) will make more efficient decisions concerning the use of public money if they have to bear the costs involved. This suggests that public spending by Holyrood should be more closely aligned with taxes raised in Scotland, and less reliant on a bloc grant from Westminster.

Jettisoning the Barnett formula would mean smaller flows of public finance from Westminster to Holyrood, but with the potential for the net pool of funds to be greatly increased if Scotland had access to North Sea oil revenues.[2] However, a new system of public finance – one of fiscal federalism as argued in the previous chapter, or of fiscal autonomy as discussed in this chapter – could produce an improved allocation of resources in the longer run and the opportunity to incentivize growth and ultimately generate additional public revenues. In our view, a system of fiscal autonomy, more so than fiscal federalism, would be the most transparent to the Scottish electorate because the link between public spending and the need to raise taxes in Scotland is as clear as it can be.

Some of our arguments in this chapter are similar to those in the last two chapters as the economic differences between fiscal federalism and fiscal autonomy is qualitative, but fiscal autonomy implies a greater degree of fiscal independence than does fiscal federalism. A new system of fiscal autonomy within the UK need not entirely cut off fiscal transfers between Scotland and the rest of the UK – it rather depends on what new political settlement was reached. However, it is likely that an independent Scotland – one with home rule – would have no more formal fiscal interactions with the rest of the UK. If this were the case, residual fiscal links between Scotland and the rest of the UK would pass only through the fiscal mechanisms of the European Union.

In the case of fiscal autonomy within the UK, Westminster would continue to supply some public goods to the Union as a whole, for example, defence and diplomatic services. If Scotland were to pay for these goods fiscal transfers between Westminster and Holyrood would continue. Fiscal transfers to balance equity in public spending might also continue. In this set up, a fiscally autonomous Scotland might well be able to continue to use various administrative systems that are already in place, for example, the pension and income tax systems. Scotland would probably make fiscal transfers to Westminster as payment for public goods supplied. It is usually argued that equity payments flow south to north in the UK – either because Scotland is a deserving case, or, because it needs to be bought off with southern generosity to remain in the Union (see Chapter 2 for an extended analysis of this proposition). Of course, an argument can be made that some of the time, especially in the 1970s, 1980s and more recently in 2007, equity transfers have run from Scotland to Westminster since the discovery of North Sea oil and that would certainly seem to be borne out by the then secret 1974 memo of the economist Gavin McCrone and in which he stated that 'Britain is now counting so heavily on North Sea oil to redress its balance of payments that it is easy to imagine England in dire straights without it'. McCrone concluded his memo by noting that oil could reverse the income gap between Scotland and England: 'For the first time since the Act of Union was passed in 1707, it can now be credibly argued that Scotland's economic advantage lies in its repeal'. In May 2008 the accountancy firm Grant Thornton claimed that an independent Scotland would have a budget surplus of £4.4 billion based on 82.5 per cent of North Sea revenues, and as we noted in Chapter 5 the most recent GERS publication confirms that Scotland could have a fiscal surplus when North Sea oil revenues are included in the calculations – assuming that oil prices remain high (where 'high' is around the US$80 per barrel mark). Either way, though, the equity flow issue and the existence of a surplus or deficit on Scotland's budget is not crucial to the case for fiscal devolution.

GOVERNMENT BUDGET CONSTRAINTS UNDER DIFFERENT DEVOLVED TAX SYSTEMS

A government running a budget deficit, that is, government spending (G) greater than tax revenue (T), has to finance it in some way. At least four different systems can be envisaged for Scotland.

First, with *fiscal autonomy in an independent Scotland* the Scottish government's budget constraint would look like that of any other independent country:

$$G - T = \Delta B + \Delta M \tag{6.1}$$

where G is Scottish government spending and T is taxes raised in Scotland. Thus, a budget deficit is financed either by issuing bonds – or, more generally, Treasury securities (ΔB), and/or 'printing' money (ΔM). The ability to print money requires a separate currency, and as we argue later, there is good reason to suppose that an independent currency is not necessarily a good option for Scotland – Scotland is not an optimal currency area. The viable options for an independent Scotland would, therefore seem to be either to remain with the pound sterling or to adopt the euro as its currency. In either event, monetary expansion, ΔM, would not be available. Moreover, if the euro was adopted, and presuming that the EU's stability pact was still functioning, limits would be placed on the size of ΔB – say, no more than 3 per cent of GDP.

Second, the Scottish government's budget constraint under a system of *fiscal autonomy within the UK* would reduce to:

$$G - T = \Delta B \tag{6.2}$$

That is, a Scottish budget deficit would be financed by issuing Scottish Treasury securities. As with the budget constraint under fiscal federalism – see below – ΔB would not be entirely at the discretion of the Scottish government because of the need to maintain consistency in the budget stance of the UK as a whole. A Stability Pact limiting the size of ΔB would be needed.

Third, the Scottish budget constraint under the *fiscal federal system* discussed in the preceding chapter is:

$$G - T = \Delta B + F - X \tag{6.3}$$

where F is fiscal transfers to Scotland (for 'needs equalization') from the Westminster budget, and X represents taxes raised in Scotland and directly passed to Westminster (Westminster continued to collect North Sea oil taxes these would be included in X). In this fiscal federal set up ΔB would represent issue of marketable securities by a Scottish Treasury – but, again, managed with Westminster to achieve internal budgetary consistency in the union as a whole.

Fourth, under the present *Barnett formula* system of financing executive spending is described in equation (6.4). Equation (6.4) also applies to the 'reformed' system offered by MacKay and Bell (2006). This retains a bloc grant but reduces it size by about 10 per cent relative to the Barnett baseline. Thus,

$$G - t = \Delta b + F - X \tag{6.4}$$

This uses $T = t + X$. Taxes raised in Scotland, T, are broken down as own-sourced and retained by the Scottish Executive, t – funds raised under the 'tartan tax' would fall into this category. X again represents taxes raised in Scotland but sent directly to Westminster. F is again fiscal transfers to Scotland. $G - t$ is not a budget deficit but the measure of vertical imbalance between spending and own-sourced taxes.[3] Δb is (emergency) borrowing by the Scottish Government from Westminster (that is, UK government inter-departmental transfers, not an issue of Scottish Treasury securities. It is worth noting that whether $F - X$ is positive, Westminster subsidises Scotland, or negative, Scotland subsidises Westminster has for many years been the subject of intense debate.

As we argued earlier, that the 'Barnett budget constraint' does little to incentivize the Scottish Executive to promote efficient resource allocation either within the Scottish public sector, or between the public sector and the private sector, nor to institute a growth promoting fiscal policy we would like to set out these arguments in more detail. We do agree, however, with MacKay and Bell (2002) that a sharp cut in the size of the bloc grant would help to induce a search for higher productivity in the Scottish public sector. More questionable is their claim that a scaled down bloc grant would grow the private sector – in the sense of a faster rate of economic growth (rather than it being a larger share of Scottish gross domestic product simply because the public sector was smaller). As reduced public spending in Scotland would not mean that Scottish taxes were reduced, one wonders what incentives are created to stimulate the Scottish private sector. One answer, of course, is that if wages in the public sector fall – as demand for labour in that sector is cut back, the bottom line of private firms will be boosted as they will be able to hire workers more cheaply. However, this is a big 'if' and rather depends upon the public sector trade unions accepting lower wages for their members. One would marvel if this happened quickly given that support for trade unionism in Scotland remains strong. A Scottish 'Mrs Thatcher' is likely needed to accompany MacKay and Bell's 10 per cent cut in the bloc grant.

We will usually refer to 'fiscal federalism' – the budget constraint defined by equation (6.3), arguing that it promotes superior resource allocation and economic growth incentives, than does the Barnett system – equation (6.4). As the budget constraints under fiscal autonomy are at least as hard as under fiscal federalism – no or small transfers from Westminster – we think that the economic advantages of fiscal federalism also apply to fiscal autonomy.

WHAT WOULD OUR FISCAL AUTONOMY IDEA LOOK LIKE?

Devolved Taxes

As we noted in Chapter 4 on fiscal federalism, even assigning more tax revenues, without any actual devolution of either tax rates or bases, would in itself represent a substantial step in hardening the budget constraint faced by the Scottish Government and Parliament. The fact that the revenue share was coming to Scotland would create an incentive to politicians to engage in policies which are growth friendly, especially if the tax take is related to the income in Scotland. However, for the appropriate incentives to be given to the private sector we need the devolution of tax rates and perhaps the tax base and, as we saw in our discussion of the fiscal federalist proposal, this can have important implications for other parts of the federal structure (that is, cutting corporation tax in Scotland could create tensions in the North of England, which does not have a parliament and is unable to have different taxes to the Rest of the UK). However, it is important to emphasize that the UK is a unitary state and not a federation and therefore simply imposing on Scotland a federal solution for its fiscal policy, drawn from the experience of federal countries, is in our view questionable. This is especially so given that other parts of the UK have had the opportunity to have their own parliament and have rejected that opportunity. It is therefore for the elected members in Edinburgh to reflect the preferences of their constituents on taxes and public spending and it is for the rest of the UK to react if it believes that is what is in the interests of the constituents of the Rest of the UK. Since Scotland is a relatively small country compared to England, cutting corporation tax in Scotland is clearly going to have a much smaller impact on the rest of the UK than if Scotland and England were countries of equal size. In other words, given its unique position in terms of its institutional structure and its natural resources, we believe that the fiscal devolution proposal for Scotland should also be unique and that is what we propose here.

In our fiscal autonomy proposal income tax is we believe well suited to both the devolution of the base and of tax rates; we see no reason to curtail the ability of the Scottish parliament to raise or lower taxes. We propose a similar arrangement for corporation tax: the Scottish Government should have the ability to lower or raise corporation taxes by any amount it chooses, although as we shall see in our empirical chapter relatively modest corporation tax changes seem sufficient to impact significantly on a country's economic growth rate. For VAT, the other major tax, this clearly could not be devolved in a fiscal autonomy solution short of independence,

although it could be assigned if Scotland were to remain part of the UK and we would recommend this. Clearly countries such as Luxembourg have demonstrated the economic importance of being able to vary VAT and this may therefore be an important argument in the case for independence.

Although in a fiscal federal solution, customs and excise duties are usually not regarded as suitable for devolution, in the fiscal autonomy solution we argue for the devolution of both of these taxes; the ability to alter excise duties has been highlighted by the recent high oil prices which has impacted particularly severely on transportation costs in Scotland (given its distance from major trading conurbations, such as the south of England and the rest of Europe, this imparts an important 'friction' into Scotland's trade with the rest of the world) and also on the ability of, for example, the Scottish fishing fleet to compete effectively with its European counterparts where the oil duty is much lower than in Scotland. The elected representatives in Scotland should be able tackle the evident frictions to trade and alter customs and excise taxes to reflect local preferences if required.

As in our discussion of fiscal federalism, we advocate for fiscal autonomy the devolution of betting tax, stamp duty, vehicle license, business license taxes, TV taxes and various types of user fees for local services. Property tax, already devolved, is also likely to continue to be a good source of devolved revenues. We are also firmly of the view that in a fiscal autonomy settlement the revenue from North Sea oil in Scottish waters should be devolved to Holyrood, in a similar manner to the devolution of oil revenues in other countries, such as the United States and Canada to Alaska and Alberta, respectively.

Given the higher oil prices of recent years there would seem to be a window of opportunity to do this. While Stancke (2003) points to the successful operation of Norway's Petroleum Fund, it should be emphasized that given the historical volatility of oil tax revenues, fiscal autonomy could prove less comfortable for Scotland than is the present bloc grant system. However, given current estimates of Scotland fiscal balance which include oil revenues this would provide Scotland with a small fiscal surplus and obviate the need for any bloc grant from Westminster thereby addressing at a stroke the moral hazard problem associated with bloc grants and allowing the Scottish Parliament to tackle the incentive mechanisms for labour and capital, something that has been singularly lacking under the current Barnett settlement

Macroeconomic Stabilization

In moving to the kind of fiscal autonomy settlement sketched above, would leave Scotland vulnerable to adverse economic shocks because

macroeconomic stabilization would be harder to achieve without the *automatic* stabilizer of countercyclically sensitive net transfers from Westminster. At present net transfers increase when Scottish-sourced revenues decline as, for example, with a decline in oil taxes relative to those in the UK as a whole and in most discussions of fiscal federalism the stabilization role is classed with defense and foreign affairs as items which should be controlled from the centre. In moving this function to the regional government in a fiscal autonomy settlement ways would have to be found to supplement tax revenue so that recessionary induced budget deficits could be financed. Scotland could do this by issuing its own marketable public debt, in much the same way that the UK Treasury does, and as the states in the US do; or for Scotland to have a line of credit in a predefined 'time of need' from UK budgetary sources. However, this would, in turn, create tensions, having implications for the UK-wide public sector borrowing requirement, and may interfere with central government macroeconomic policy.[4] According to the International Monetary Fund (IMF), to prevent this happening, internal stability pacts need to be negotiated between the different levels of government.[5]

Internal Stability Pacts

In Germany where sub-central government has significant borrowing powers, each level of government is responsible for avoiding an excessive public deficit. A centralized agency, the Financial Planning Council, issues recommendations on budgetary policy and facilitates discussions aimed at agreeing internal consistency. In Italy, since 1999, targets are set for sub-central government deficits and if a target is missed fines will be levied should Italy itself be sanctioned under the Maastricht Treaty. Similarly, in Austria, targets are set for sub-central government borrowing with fines for Lander and local governments that do not meet these targets. Even with these mechanisms it can be argued that the management of fiscal policy in federal systems is more complicated than in unitary systems: deficit targets for sub-central government can introduce a procyclical bias into spending at that level of government.[6] Finally, to mention the Australian Grants Commission again – which governs the allocation of public finances between the states – in Chapter 2 we argued that such a body in the UK would not be particularly successful because a threat of Scottish secession would always hang over any 'efficiencies' it implemented in the Scottish bloc grant.

Just how much macroeconomic stabilization there should be in Scotland depends very much on how close the correlation between the regional business cycles are within the UK. Certainly given Scotland would be an oil

Table 6.1 A summary of a fiscal autonomy proposal

Type of tax	Assigned	Devolved
Income	No	Yes
Corporation	No	Yes
VAT	Yes (without independence)	Yes (with independence)
Stamp Duty	No	Yes
Customs+excise	No	Yes
Other duties	No	Yes
North Sea oil	No	Yes
Other Functions		
Macrostabilization	NA	Yes, some
Borrowing	NA	Yes

producer in our fiscal autonomy proposal and the rest of the UK a non-oil producer, there would be potentially important asymmetric shocks hitting Scotland relative to the rest of the UK as the price of oil and the dollar change. One way of addressing this would be the establishment of an oil revenue stabilization fund along the lines of the Norwegian example. In addition to this some macrostabilization function would be required.

In sum, and in contrast to the fiscal federalism solution, our fiscal autonomy proposal advocates the devolution of all feasible tax rates and tax bases rather than a focus on the assignment of taxes. Additionally, we propose some macrostabilization role for the Scottish Government and that the Scottish Government is able to borrow either through a Scottish Loans or on open capital markets. Table 6.1, summarizes our ideas for fiscal autonomy.

CONCLUSION

In this chapter we have argued the case for fiscal autonomy for Scotland. Fiscal autonomy, which can be designed for Scotland within the UK political union or for an independent Scotland, offers a much sharper and clearer incentive mechanism – for both the private sector and the elected representatives in Edinburgh – than the current Barnett financial arrangement and also relative to other lesser forms of fiscal devolution, such as fiscal federalism. We have argued that there is now empirical support for a link between the ability to change taxes on labour and capital and the efficiency with which resources are allocated within a country or region. Issues of equity transfers and the insurance properties of the present UK-wide

social security system would need to be addressed in the design of a fiscal autonomy settlement and in that regard we advocate an oil stabilization fund along the lines of the arrangements in Norway and an increased role for macroeconomic stabilization for the Scottish Government and its ability to borrow either from the UK Treasury or on open capital markets. If Scotland were to be fiscally and politically independent of Westminster, we argue that Scotland should retain its fixed links with the pound sterling and this is discussed in greater detail in Chapter 10.

Our analysis points to a risk–return trade-off for Scotland inherent in fiscal autonomy. The root of this trade-off is the hardness of the budget constraint imposed by fiscal autonomy compared with either fiscal federalism or the present bloc grant system. The potential return to fiscal autonomy is faster economic growth resulting from properly incentivized public spending and taxing decisions. Thus, each extra pound of public spending has to be balanced with extra taxes (or, in the short run, public borrowing, which in the long run itself has to be repaid through higher taxes of one sort or another). The extra risk stems from the loss of an annual bloc grant of more-or-less known size from central government. With fiscal autonomy, tax revenue shortfall is not bailed out by central government. Net transfers between Scotland and Westminster do not move in counterpoint to the size of the Scottish tax take, increasing in years when Scottish tax collections fall. The big economic question for the Scottish public is, then, is it willing to accept this risk–return trade off or is it more comfortable with the cushioning effects of fiscal federalism as discussed in Chapters 3, 4 and 5, or the even greater cushioning of the present bloc grant system? As economists we would argue that the incentive generating effects of fiscal autonomy could be so great that the potential returns from fiscal autonomy could outweigh the potential risks, and we believe there is accumulating empirical support for this contention.

In sum, we believe our fiscal autonomy suggestion is superior to the current fiscal settlement for Scotland in terms of the efficiency–equity trade-off. As we noted earlier, the current Barnett-based settlement fails on this criterion in that nearly all of the emphasis is on the equity side of the equation and nearly none on the efficiency side. Fiscal autonomy presents a much better balance – in our view equity would not need to be compromised from its current position, but what would be sharply improved is the efficiency function, in terms of both the public and private sectors. Our arguments for fiscal autonomy also emphasize the hardening of the government's budget constraint, something which Barnett singularly fails to do; and, although the fiscal federal solution also provides a harder constraint than Barnett it is not as hard as the fiscal autonomy outcome.

The key potential negative aspect of our FA proposal relates to the macroeconomic stabilization function of fiscal policy. In moving to a harder budget constraint, the Scottish Government's budgetary position will in part be determined by the capricious nature of the price of oil, and to a lesser extent the dollar exchange rate (since oil is priced in dollars), and it would be vitally important that an oil fund were set up to facilitate the smoothing of the price of oil. Additionally, some of the macroeconomic stabilization function currently held by Westminster should also be devolved (in order to address asymmetric shocks against the backdrop of a common currency) and if Scotland remains within the UK a stability pact would need to be agreed to underpin such a system. If Scotland became politically independent a formal stability pact would not be required, although as long as the business cycle in Scotland was co-synchronous with the rest of the UK an informal stability pact would have to be adopted.

NOTES

1. *Glasgow Herald* and *The Scotsman*, 5 September 2008.
2. See Gallacher and Hinze (2005) for a recent discussion of the Barnett formula and its usefulness as a funding formula for the Scottish parliament.
3. Even under the present system, *T* remains as taxes raised in Scotland but it drops out of the budget constraint because the vast bulk of these are directly passed to Westminster. If the Executive activated the 'tartan tax' own-sourced taxes, *t*, would increase in size.
4. A classic example of mismanaged sub-central government spending and borrowing interfering with central government macroeconomic policy is that of Argentina during the period of its currency board, 1991–2001. See Cuevas (2003).
5. See IMF (2003).
6. See IMF (2003).

7. A restatement of the case for Scottish fiscal autonomy

In this chapter we rebut the case that Ashcroft et al. (2006) make in favour of the status quo fiscal settlement in Scotland that stems from the Scotland Act 1998 and address their criticisms of our proposal for fiscal autonomy outlined in the previous chapter. Their case for Barnett is that it offers a hard budget constraint that effectively disciplines the Scottish public sector. We will show in this chapter that this belief in Barnett is based on a serious misconception of its economic consequences. Despite the fact that Barnett sets an upper limit on public spending by the Scottish Government it is by no means a hard budget constraint. Indeed, so poor is its fiscal discipline on the Executive that it is better described as a formula for a 'Rakes Progress'.

THE FLAWED CASE FOR BARNETT

Ashcroft et al. (2006) provide a table in which they compare the characteristics of the Barnett formula system for financing devolved Scottish Government spending with that of fiscal autonomy of the type that we discussed in the last chapter. According to them, like fiscal autonomy, the Barnett formula offers a hard budget constraint and is efficient at handling the split of resources between the Scottish public and private sectors. They say 'no attempt is made in this table to indicate the degree or extent to which each characteristic is present in each system'. However, they do say that:

> The present Barnett based system already exhibits many of the characteristics required to encourage the efficient use of resources and allow a democratically disciplined Scottish Parliament to make optimal allocation decisions.

We take this to mean that they think that the Barnett formula promotes equalization of net benefits within the present structure of public spending, between current Scottish public and private spending and also across time.

They correctly imply that the focus of our criticisms of Barnett is that it acts as a soft budget constraint on Scottish public spending, resulting in non-optimal resource allocation. But they claim that: 'There would appear to be little between the two systems [Barnett versus fiscal autonomy] in the hardness of the budget constraint'. This claim is wildly inaccurate. To understand why, economic analysis needs to be applied to the matter and we return to the various budget constraints introduced in the previous chapter.

WHY BARNETT DOES NOT WORK AS A MECHANISM FOR FISCAL DISCIPLINE

Begin by writing $G - T$ as Scotland's budget deficit with Westminster, where G is the Scottish Government's spending and T is taxes collected in Scotland.[1] Now consider how a Scottish budget deficit, if there is one, is financed. Write F as Barnett transfers to Scotland and X as taxes raised in Scotland but sent to Westminster and, so, the difference between F and X is the counterpart to a Scottish budget deficit. Thus, if F exceeds X Scotland is a net recipient of public funds from Westminster.[2]

Thus,

$$G - T = F - X \tag{7.1}$$

This implies that a Scottish budget deficit is financed by net financial transfers into Scotland from Westminster.

It is in the nature of the present Scottish fiscal system that F is fixed through the Barnett formula. It is also true, approximately at least, that the Executive spends the whole of the Barnett grant. Thus, $G = F$ (an amount set by the formula). That G and F are fixed is recognized in equation (7.2) by putting an asterisk after them:

$$G^* - T = F^* - X \tag{7.2}$$

The implication of equation (7.2) for given G^* and F^* is that if taxes, T, collected in Scotland happen to fall, to balance the equation taxes raised in Scotland and sent to Westminster, X, must fall too. Under present fiscal arrangements this will happen automatically as income taxes, VAT and some other taxes (but not council tax) collected in Scotland are indeed sent to Westminster.[3]

With this background it is easy to see why the Barnett formula is a soft budget constraint. The following arguments also apply to the

reform ideas of MacKay and Bell (2006) to retain the bloc grant but to reduce its size by about 10 per cent; as well to the limited reforms suggest by Bell and Christie (2002) which is also to reduce the size of the bloc grant; and, perhaps to a lesser extent those of McMillan (2005) and McGregor and Swales (2003). The last two mentioned papers recognize that the bloc grant command and control system is failing, not only because failure in the command part of it – too much public money being sent to Scotland, but also because of failure in the control part – the money is being spent badly for want on binding constraints on Scottish decision-makers.

Thus, any fall in taxes collected in Scotland is offset by reduced tax transfers to Westminster. In other words, Scottish budget deficits ($G - T$) are self-financing. The Executive can maintain the level of government spending, G, regardless of what is happening to the level of taxes raised in Scotland.

By concentrating only on F^* – the Barnett transfer to Scotland – Ashcroft et al. (2006) misled themselves into thinking that this alone constitutes a hard budget constraint. However, the hardness or otherwise of a budget constraint must also consider the responsibility that a government has for raising the money it spends. Barnett does not impose this responsibility; indeed, it allows the Scottish Government and Parliament to be shot of it.

The Government does not have to be concerned with pithy fiscal matters such as matching taxes with spending.[4]

Nor does the Government have to be concerned for reasons of fiscal discipline with introducing fiscal polices to raising the Scottish tax base by promoting economic growth.

Nor, if taxes raised in Scotland fall does the Government have to worry about balancing its budget by cutting the level of public spending.

Nor does the Government have to risk the wrath of voters by raising tax rates (rather than cutting its spending).

Nor, even, does the Government have to think about increasing its borrowing by issuing tradable securities against future tax revenues.

Indeed, none of these tough decisions have to be made by the Scottish Government and it is for this reason that they are most unlikely to worry about the balance of public and private spending in Scotland, or intertemporal matters such as growing the Scottish economy.[5]

With the Barnett formula, if the Scottish Government wanted to worry about any of these things it would be a matter of choice and not of fiscal discipline as imposed by the present fiscal system. Of course, the Scottish Government could decide to think about tough issues such as what policies it might adopt to raise the Scottish tax base; and if it wanted to it could

think about whether the level of its spending is justified relative to the level of taxes raised in Scotland. But these are matters that governments with real hard budget constraints have to think about and have to take unpleasant measures to deal with, but not the Scottish Government. It is free of such tough decision making; like the woman who won the lottery, all it has to worry about is how to spend it!

The closest analogy that we can think of to the present fiscal settlement is if a rich Laird gave his son a generous allowance. He links this allowance to an obscure formula that over time basically makes little or no difference to the size of the allowance. He also tells his son that he would like him to earn some money on his own account and to hand it over to him when he gets it. Furthermore, part of the deal is that however much each year the son hands back to the Laird the generous pocket money will always be paid. Anybody can see that this is a formula for a rake's progress. The boy will reason that with the allowance secure 'why bother working to improve myself?' On this point, an inspection of William Hogarth's depiction of the *Rake's Progress* is rewarding – in a series of eight pictures from stalwart young man to years later residence in bedlam: an 'economic bedlam' is our depiction of the present fiscal system.

OIL PRICES AND OIL TAX REVENUES

What if Scottish tax revenues increased, due to a rise in oil prices? Many in Scotland see this as a bedlam of a different kind because the increased tax revenues are presently passed directly to Westminster. It is the UK Treasury that benefits while Scottish Government spending remains constrained by Barnett. If oil prices fall, tax revenues raised in Scotland also fall, and net tax transfers to Scotland increase. This relieves the Scottish Government of the need to adjust spending to match lower Scottish-sourced taxes. What we are observing here is the Scottish Government being insulated from the realities of fluctuating tax revenues. This, indeed, is an advantage for Scotland of the present bloc grant system. It is the central government's Treasury at Westminster that has to deal with fluctuating tax revenues, probably by altering the net issue of Treasury Bills. In the Introduction we pointed out that to some extent it is rational for central government to bear the risk of fluctuating tax revenues. This is because the tax base of the whole of the UK is less subjected to idiosyncratic shocks to tax revenues than is any single region. However, as we also observed earlier, using a bloc grant to insulate Scotland from fluctuations in own-sourced tax revenues

creates a moral hazard on the part of the Scottish Government. This moral hazard shows itself through the channels that we have just identified: Scottish fiscal policy does not have to make promoting economic growth a priority; balancing public spending in Scotland with taxes raised in Scotland is of no concern; and, as a Scottish budget deficit does not have to be financed by issuing a Scottish Treasury's securities, the Government is unconcerned about striking a balance between current and future public spending.

BUDGET CONSTRAINTS UNDER VARIANTS OF FISCAL DEVOLUTION ARE MORE EFFECTIVE THAN UNDER BARNETT

It is of course true, as we argued in Chapter 3, that variants of tax devolution offer harder budget constraints than the Barnett formula. Here we consider two variants: fiscal federalism and fiscal autonomy.

Fiscal Federalism

For the fiscal federalist position, write:

$$G - T = \Delta D = F^*_{FF} - X_{FF} \tag{7.3}$$

where ΔD is new debt issued by a Scottish Treasury, F^*_{FF} (transfers from Westminster to Scotland under some formula to be worked out) is fixed but, presumably, lower than F^* as X_{FF} (tax transfers from Scotland to England with fiscal federalism) is lower than X, given that with fiscal federalism Scotland would be retaining some of the taxes raised in the country instead of sending them all to Westminster. For example, with fiscal federalism Scotland might retain 40 per cent of the income taxes it raises, sending the other 60 per cent to Westminster.

With fiscal federalism, if Scottish-sourced taxes fall, the left hand side of equation (7.3) increasing, the right hand side of equation (7.3) must also increase, but *not by an equal automatic reduction in taxes sent to England* as is the case with the Barnett formula because we are assuming that only 60 per cent of income taxes are sent to Westminster. To finance a larger Scottish budget deficit, the Scottish Government would have to issue debt – so ΔD is positive. As the financial markets effectively set limits on ΔD, the Executive must now be concerned for the levels of both G and T – it faces hard decisions over its tax policies and level of government spending.

FISCAL AUTONOMY

The budget constraint with Scottish fiscal autonomy is tougher still and it is written as:

$$G - T = \Delta D \tag{7.4}$$

The terms $F^*_{FF} - X_{FF}$ drop out as fiscal transfers from and to Westminster would cease under fiscal autonomy.[6] Fiscal cushioning by Westminster would be removed and the Government would be on its own managing its fiscal affairs. While Ashcroft et al. (2006) lament this state of affairs it is in fact the actual situation faced by many countries the same size as Scotland and smaller.

EQUITY ISSUES

Does fiscal autonomy marginalize equity in the Union considerations? As Scottish-sourced taxes vary over time, especially with oil prices, the Scottish budget deficit, $G - T$, probably varies from negative to positive and back again. In effect, either England is sending 'aid' to Scotland or Scotland is sending 'aid' to England. The Scottish National Party has recently argued on the basis of the attribution of all oil revenues to Scotland, that Scotland subsidises the rest of the UK to the tune of £853 per capita. However, unionist parties, such as the Conservative and Labour parties and recent comments in the English press, have argued that Scotland obtains generous transfers from the rest of the UK, allowing per capita public spending in Scotland to be higher than in England, and far higher in comparison with some English regions. If one accepts the latter argument, it would clearly be a mistake to think that the Barnett formula is not at risk. In other words, the so-called 'equity' transfers to Scotland might well be disappearing anyway. And the same goes for ex-First Minister, Jack McConnell, who is quoted as saying that fiscal autonomy would only mean lower government spending or higher taxes – but absent direct access to high oil revenues Scotland might be facing that scenario anyway.

INCENTIVE EFFECTS

In supporting the Barnett bloc grant system Ashcroft et al. (2006) essentially avoid the important issue of the incentivizing effects of tax changes

on private sector behaviour, stressing the potential costs of moving to a more devolved fiscal system. For example, they indicate that 'the Scottish Parliament can increase or decrease its budget through increasing or decreasing the standard rate of income tax'. However, the rate of variation allowed is small and we believe would do little to produce incentives for the existing labour force nor be sufficient to reverse the persistent outflow of talented labour from Scotland evidenced over the years. And, as of 2008, it is only income tax the Scottish Parliament can currently change. Changes in corporation taxes and other taxes, such as VAT, seem to have had powerful incentive effects in other countries, but the Scottish parliament currently has no power over them.

Cuts in corporation tax are often seen as part of 'a race to the bottom' and they indeed could be used in that way if they were used to invest in the production of goods and services which could be produced more competitively elsewhere (that is, with lower wage costs). However, rather than using tax changes to engage in such a race, they could be used in sophisticated ways to reinforce and bolster Scotland's existing strengths. For example, Scotland has world renowned judicial and educational systems and an important financial sector built on the existence of a well-qualified work force and well-defined property rights. Why shouldn't Scotland aspire to be a leading financial sector in the world (with the sector based in the Glasgow–Edinburgh hub)? Other countries – Switzerland and Luxembourg, for example, have so aspired and have made dramatic inroads in this regard (for example, the authorities in Luxembourg have skilfully manipulated their VAT system vis-á-vis the rest of Europe to build an important financial services sector and a very prosperous economy).

Ashcroft et al. (2006) emphasize the down side, or costs, of the ability to have freedom over tax raising powers. One is the potential spillover effects – in terms of labour and capital movements – of having tax rates which are quite different to those in the rest of the UK. For two roughly equally-sized economies, such spillovers are likely to be of considerable concern, but for a small open economy, such as Scotland, vis-á-vis its much larger neighbour, the negative spillovers for the neighbour are likely to be small while the positive advantages for Scotland are likely to be highly significant. Indeed, and as we alluded to above, it can be argued that the current system has had detrimental spillover effects for Scotland in terms of north–south labour movements. Again, Luxembourg seems to be a good example of a small open economy that has created negative spillovers for its much larger near neighbours, but not incurred their wrath.

Ashcroft et al. are correct to note that a move to more fiscal devolution for Scotland would mean moving away from the insurance function offered by the current system to one which is much more uncertain,

relying on the vagaries of the price of oil. However, and as we noted in our previous paper, there are methods of smoothing oil revenues and the Norwegian model seems to offer an excellent example of this and this kind of argument would seem to make the case for the Scottish Government to have a macro stabilization role.

So we would counter the claim of Ashcroft et al. that a move to a system in Scotland which is much more reliant on the devolution of taxes is one in which efficiency considerations are privileged whilst equity and stabilization issues are marginalized. There is no reason why equity issues need be abandoned with fiscal autonomy, although the way they are achieved under the new system would clearly be different from that in the current system. Indeed, it would seem to us that in their support for the Barnett formula, Ashcroft et al. privilege the equity aspect of a fiscal settlement at the expense of the efficiency aspect. As we stressed in Chapter 2, stabilization issues can be addressed in a fiscally devolved system and there are examples of this from the experiences of other countries, which have a greater degree of fiscal devolution than the UK.

CONCLUSION

We think that by defending the Barnett formula so strongly, with essentially no criticisms of it at all, that Ashcroft et al. (2006) are simply making a case for the status quo. They are quite clear as to why they do so: 'If anything Hallwood and MacDonald's proposals are likely to increase the pressure on Scottish MPs at Westminster'. Indeed, we too think that this would be the case. The West Lothian question would become even more poignant than it is now. However, one has to wonder whether the status quo fiscal-cum-Barnett settlement is a stable political equilibrium for the UK? It is implicit in this book we think that it is not.

The Scotland Act of 1998 created the absurdity of separating public spending from taxation. One has to wonder for how many more years are Scotland and the rest of the UK to labour under this failing fiscal mechanism. We think that some institutional response will inevitably be applied to address this important assymetry, and we have offered two such – fiscal federalism and fiscal autonomy. Other fiscal mechanisms no doubt could be invented, but whether they, whatever they are, can handle the West Lothian question with less strain on the UK as a unitary state, remains to be seen.

Nobody, of course, can foresee the future, but if we were to take a long view of how the 'fiscal anomaly' is to be addressed where would we place our bets? With the Scottish Liberal-Democrats and their Steel

Commission supporting fiscal federalism, the new leader (2008) of the Conservative Party saying that Scotland can have fiscal autonomy if it wants it, the establishment of the Calman Commission to investigate Scottish public finances, and Prime Minister Brown shifting his position from 'against' to 'in favour', as well as the Scottish Nationalists being in favour of any tax devolution, it has to be recognized that the idea has political legs. Presumably if this rising tide in favour of tax devolution is not turned back, the West Lothian question will come even more to the fore. Judging by what is being said in the English press and the Conservative Party, Westminster may move to restrict the voting rights of Scottish MPs, just as English MPs are restricted on voting on so many Scottish spending matters. Thus, one really does have to wonder whether the Constitutional settlement of 1998 is a political equilibrium for the UK. If it is not, if the ultimate equilibrium is not to be Scottish independence, then perhaps reversion to two sovereign parliaments under one crown will be it. However, given that there may well be important institutional constraints on the devolution of all – or a substantial proportion of – taxes within a unitary state (see, for example, Case C-88/03 of the Court of Justice of the European Communities), it may be that it is only full blown independence which can guarantee that the full panoply of tax levers are devolved to the Scottish Parliament.

NOTES

1. If $G - T < 0$ there is a Scottish budget surplus with Westminster, of which more later.
2. We are aware that there are provisions for emergency borrowing by the Executive from Westminster, but as Ashcroft et al. (2006) leave this out of their account so will we.
3. The same reasoning applies even if Scotland is running a budget surplus with Westminster, $G - T < 0$. The equality (7.2) must continue to hold. A fall in Scottish tax collections also causes a fall in the amount of taxes sent to Westminster.
4. Usually this is stated in terms of matching 'over the course of a business cycle'.
5. It is true, though, as we have argued in Chapter 2, that in principle the Scottish Executive and Parliament should be able to get the balance between different types of public spending right.
6. We have not split ΔD into issue of marketable debt and issue of money.

8. Fiscal devolution in some other countries

For comparative purposes, this chapter presents an overview of the fiscal federalism experience in other countries. We look at how the issue of the vertical imbalance of fiscal structure is addressed in other European countries and then we go on to look at how fiscal federalism works in federal countries.

SUB-CENTRAL GOVERNMENT IN OTHER COUNTRIES

About 60 per cent of public expenditure in Scotland already has been devolved to the Scottish Executive. The devolution of expenditures on health, education, housing and community amenities, social security and welfare, and general public services to sub-central governments (SCGs) is common in many EU countries – though not all together in any single country.[1] As many of these expenditure categories have also been devolved to Scotland, in broad outline, the division of expenditure responsibilities is not so controversial.

This, however, cannot be said of the division of taxing powers between sub-central government (SCG) and central government (CG) in the UK – a division that differs a good deal from that in many other European Union and non-EU countries.

It has been pointed out that:

> there has in recent years been a growing literature on the arrangements in individual countries and on comparisons between them, and the resulting exchange in ideas produced by this literature has itself played a part in the evolution that can be observed in several countries. (OECD, 2002, p. 12)

So what can the UK learn from international practices?

Table 8.1 shows the composition of SCG revenues in eight EU countries, divided into own-tax, non-tax and grant revenues. Most striking is the heavy reliance – almost three-quarters of total revenues – that the UK has on grants to SCGs as their main revenue source. SCG own-taxes in

Table 8.1 Sub-central government revenues: latest year – percentages

	Own-tax revenues	Non-tax revenues	Grants
Belgium	79	3	19
Denmark	51	8	40
France	47	19	34
Italy	34	14	53
Netherlands	10	14	76
Spain	37	9	54
Sweden	75	6	20
UK	14	13	73

Source: OECD (2002, Table 3.3). Percentages may not add to 100 due to rounding.

the UK amount to only 14 per cent of SCG revenues (these figures are UK-wide). The Netherlands aside, vertical imbalance is greatest in the UK.

Table 8.2 classifies SCG taxes by tax base. The almost total reliance on property taxes in the UK is striking. This is in contrast to six of the other seven countries. SCG taxes on income rather than property account for almost all of SCG tax revenues in both Denmark and Sweden, for over 50 per cent in Belgium, and over one-quarter in Spain. Table 8.2 also shows data on revenues raised through taxes on goods and services – expenditure taxes – at the level of SCG. In the UK no such revenue is raised, but about one-tenth of SCG tax revenues are raised from this tax base in France, in Italy over one-quarter, and over one-third in Belgium (state level), Netherlands and Spain. Accordingly, Table 8.2 shows that at the SCG level the UK is alone among the eight EU countries in heavy reliance on grants from CG together with an almost total dependency on property taxes as the single source of tax revenue.

Table 8.3 gives a somewhat more detailed picture of SCG taxes in the eight EU countries. In Belgium, following the Lambermont agreement of 2001, income tax is regarded as a joint tax between the federal and regional governments. The regions operate 'on the margins', meaning that they have power to alter the personal income tax rates by ±6.75 per cent, but may not change the tax base. The regions have both tax base and tax rate autonomy over a large number of other taxes including gambling and betting, real estate tax, the radio and TV fee, and the vehicle registration tax.[2] The OECD (2002) summarizes: 'the regions now enjoy complete autonomy over 40 per cent of their revenue (regional taxes) and they have rate autonomy over the remaining 60 per cent (personal income tax)'. The Belgian regions however are required to avoid double taxation with other

Table 8.2 Classification of sub-central government taxes by tax base – percentages (1999)

	Belgium	Denmark	France	Italy	Netherlands	Spain	Sweden	UK
Income and profits tax	55	93		8		26	100	
Taxes on payroll and work force			4					
Taxes on property	6	7	52	22	63	36		99.7
Expenditure taxes	39		11	26	38	35		
Other taxes			34	45		3		0.3
	100	100	100	100	100	100	100	100

Source: OECD (2002, Table 3.4). Percentages may not add to 100 due to rounding.

Table 8.3 Sub-central government taxes: eight EU countries.

	Characteristics of SCG powers of taxation	Constitutional position
Belgium	The regions have almost complete autonomy over 40 per cent of their revenues (regional taxes) and rate autonomy – but not tax base autonomy, over the other 60 per cent	A federal country
Denmark	Income tax covers about 90 per cent of SCG tax revenues. Each SCG has tax rate autonomy, but the tax base is set by central government. The setting of tax rates is at budget time, so tax and spending decisions are concurrent. Municipalities tax rates range from 13–22+ per cent. Upper and lower limits are constrained by CG	A unitary state with substantial subsidiarity to polities in 275 municipalities and 14 county councils
France	SCG does not control tax bases. Communes, departments and regions vote independently on tax rates. Limits on rates are set by CG	Regions have some legislative powers comparable to federal states
Germany	The Lander regions have control over 63 per cent of tax revenue and 31 of expenditure taxes. Property tax is only a minor component of the total revenue of the SCGs, which is perhaps surprising given that theory suggests it can have an important role to play in a devolved tax system	A federal country
Italy	From 1992 tax responsibility transferred to SCG. From 2001 grants replaced with VAT sharing – SCG can vary the tax rate within limits set by CG. The tax base of the Regional Tax on Productive Activities is the value of production less costs in each region	Regional authorities have some powers comparable to federal countries
Netherlands	SCGs choose which taxes to levy within relevant Acts, and can vary tax rates.	Decentralized unitary state. Twelve provinces and 548 municipalities
Spain	Tax sharing with central government, and SCGs can set their own income tax rates but not tax bases	Regional authorities have some powers comparable to federal countries

Table 8.3 (continued)

	Characteristics of SCG powers of taxation	Constitutional position
Sweden	SCG tax revenue is from a single tax base – personal income. Freedom to set tax rates but not rates	A unitary state with Constitutional protect of the rights of local self government to levy taxes and determine tax rates
UK	Council tax on imputed capital value paid by all tenants, with discounts for single householders, direct to local government; non-domestic rate set by Scottish and UK parliaments, respectively – bases also vary between Scotland and the rest of the UK. Scottish Parliament can also alter the basic income tax rate within specified margins but not tax bases. Size of bloc grants take into account level of local taxes raised	Unitary state of four nations. In Scotland 32 local authorities. In 1999 Westminster administrative powers transferred to the Scottish Parliament

Source: Extracted from OECD (2002).

jurisdictions, and not to engage in unfair tax competition. Moreover, they have no autonomy in the levying of VAT or corporation tax.

In Denmark the SCGs largely control their own income tax rates, though not income tax bases – which are defined by CG. Income tax rates can and do differ between SCG tax jurisdictions in Denmark – lying between 13 per cent and more than 22 per cent (CG sets limits aimed at preventing very large disparities).

The combination of tax rate control by SCG and tax base control by CG is also a strong feature in France (mainly property taxes, expenditure taxes and other taxes), Italy (property taxes and other taxes), Netherlands (property taxes and other taxes), and Sweden (income taxes).

Fiscal Autonomy in Spanish Regional Government

Spain has two systems of regional government, the Foral system which applies to the Basque Country (the provinces of Alva, Biscay and Gipuzkoa) and Navarre – the 'specific status regimes' in Table 8.4; and the Ordinary Regime which operates in the other 15 Autonomous Communities (or

Table 8.4 Fiscal autonomy in Spain

	Fiscal autonomy	Responsibilities assumed
Ordinary regime	Limited	All devolved responsibilities but may exclude health
Specific status regimes: Basque country and Navarre	Full	All those transferred as in the Ordinary regime plus

Source: Abstracted from Gordo and Hernandez de Cos (2000).

regions). Here we are mostly interested in the specific status regimes as these come closest to 'fiscal autonomy'. However, it should be stressed that the Spanish system is 'asymmetric' in the sense that not all regional governments are treated the same way.

The Basque country and Navarre enjoy a high level of autonomy over public spending decisions covering education (primary, secondary and tertiary), health, social assistance, housing, highway, culture, police, agriculture and forests, and environmental protection (Sole-Vilanova, p. 98).

The Constitution allows for all taxes, except customs duties to be devolved to the Autonomous Communities as well as to the Basque country and Navarre (Sole-Vilanova, p. 98). Ceded taxes include the wealth tax, death and donation taxes, property transaction taxes, stamp duties, and gambling taxes – but there are limited freedoms to change tax bases, tax rates and tax deductions. Thirty per cent of income taxes collected by central government is assigned to originating ACs. The Basque country and Navarre have additional fiscal freedoms over income taxes and corporation taxes. The principles of market unity and a degree of horizontal balance govern regional public finance. With the Basque country being relatively prosperous compared with many other regions in Spain, it pays for 6.24 per cent of central government spending on non-devolved matters (such as defense), even though it represents only 5 per cent of Spain's population.

How far reaching is this tax autonomy? According to the 'European Autonomies' Tax Web' it is extensive as the Basque country and Navarre 'enjoy considerable fiscal autonomy, comparable to that of any EU Member State', and the Spanish system of fiscal autonomy is 'compatible with potential fiscal harmonization in the EU. It should be considered as just one more tax system among the tax systems of the Member States'.[3] This is maybe going too far as in some specifics 'complete' fiscal autonomy are not enjoyed.

Thus, the specific status public financing systems are codified in the Economic Accord (1981 and 1997) between the State and the Basque

Country and Organic Law 13/1982 (amended 1997) in the case of Navarre.[4] 'Specific status' allows these regional governments to establish and regulate their own tax systems as defined as 'concerted taxes', but to coordinate and harmonize them with the general Spanish system. These conditions mean that specific status regional governments cannot have a lower tax burden than in the rest of Spain, tax rules governed by international treaties must be respected, and free movement of capital and people within Spain must not be hindered. As concerted tax cover almost all taxes raised by the State (except customs duties), the specific status regional governments are required to make payments to the State for services rendered – such as national defence and diplomatic services. This payment is called the 'Cupo' and it is calculated as a geometric weighted average of each special status areas relative (to national) population and GDP. Social security payments are sent to the Spanish treasury and 'returned' to the specific status areas – in fact, the monetary flows are netted out in the Cupo. The regional governments also share in any EU funds directed to Spain – these are passed on by the State to the specific status areas.

Borrowing by the regional governments is regulated and coordinated by the State – an aspect of harmonization aimed at both maintaining prudence at the regional government level as well as ensuring consistency with the central government's targeted fiscal balance. Borrowing with maturities of greater than one year is restricted to financing capital projects; amortization payments (interest plus principal) should not be greater than 25 per cent of a regional government's current revenue, and the issue of any public debt requires authorization by the state. Moreover, regional governments have to submit to the Fiscal Policy and Financial Council (CPFF) – a central government organ, an annual debt schedule that has to be agreed between the two parties. Any changes therein must be agreed with the CPFF.

SOME FEDERAL COUNTRIES

In this section we consider the extent of fiscal decentralization in some key federal countries. In summary, what the evidence from these countries shows is:

- federal countries exhibit a mixture of tax sharing, assignment and devolution of tax bases;
- there are common patterns in federal countries in terms of the types of taxes that are typically reserved, assigned and devolved;
- practically all countries (the main exception is the United States) have extensive equalization systems – typically by transfer grants.

Table 8.5 Structure of state tax revenues and grants as a percentage of state income in three federal countries

	Income tax (as % of total tax income)	Property tax (as % of total tax income)	Expenditure taxes (as % of total tax income)	Other taxes (as % of total tax income)	Grants as a percentage of State government income
Australia	0	30	41	29	59
Canada	43	4	40	13	22
USA	37	4	56	3	29

Source: Norregaard (1997, table 3), based on IMF *Government Finance Statistics Yearbook.*

Table 8.5 shows the structure of state revenues in three non-European federal countries. In each case there is substantial reliance on at least two tax sources. Income taxes are major sources of tax revenue in Canada and the USA. Expenditure taxes on goods and services are important sources of tax revenue in all three countries. Australia is a little different from the other three federal countries in that there is no state tax revenue from income taxes while there is quite heavy reliance on property taxes – two features also found in the case of Scotland. The Australian states have heaviest reliance on expenditure taxes – as do the states in the USA, and to a lesser degree in Canada.

A striking feature of Table 8.5 is the importance of grants from the centre to the sub-central tier of government even in well developed federal systems – it ranges from 22 to 59 per cent. The figure of 22 per cent is in fact the lower bound internationally (for example from Table 8.2 we note that in the Netherlands where they do have fiscal decentralization, the bloc grant component is 76 per cent) and indicates that in a new fiscal settlement for Scotland short of independence may well include an element of (Barnett-type) bloc grant.

Canada uses an 'overlapping' income tax system – central government sets the tax base while the Provinces set their own tax rate. This, in fact, is similar in form to the so-called 'tartan tax'. The USA goes a step further, allowing the states to vary the tax-base using various tax-reliefs. 'Coordination' between the Provinces and Federal government is practiced in Canada but not in the USA. Also, with an eye to keeping overall personal income tax rates as low as possible, in the USA state income tax is deductable from federal income tax. The downside of this is the moral hazard that electorates in the individual States do not necessarily bear the full opportunity cost of their spending decisions because the reduction in federal income tax payments is tantamount to tax exporting.

The tying of sub-central government expenditures and own-revenues more closely together in many countries goes someway to imposing a hard budget constraint on sub-central government. This is expected to be helpful in promoting rational resource allocation at the sub-central level by eliminating the moral hazard caused by the exclusive use of grants from central government, especially when local polities are able to assess true regional needs better than can central governments.

One interesting aspect of the federal tax structure in Canada is that corporation tax rates are allowed to vary across provinces. Corporation tax rates weighted by sector vary from a low of about 9 per cent in Quebec to a high of 17 per cent in Manitoba. Nine of Canada's ten provinces have rates in the 13–17 per cent range. There is an inverse relationship between changes in corporation tax rates and inter-provincial differences in the growth rate of reported corporate profits. That is, cutting provincial corporate income tax rates results in faster provincial profits growth.[5]

An inverse relationship between the cost of capital (including corporation tax) and capital accumulation has also been found.[6] Taken together these findings suggest that a province can increase its rate of capital accumulation by reducing its rate of corporate income tax.

But does competition in corporate income tax rates causes a 'race to the bottom'? While it seems that rate competition exists between Ontario and Alberta, and there is weaker evidence that Quebec competes, there is no evidence that the Atlantic Provinces do.[7] Competition in corporation tax rates between provinces may be weak because provinces also compete to attract capital and productive labour through the supply of public goods that have to be financed through taxes. However, the Canadian experience is at odds with the experience in some other countries and the success of the policy in Canada is possibly a reflection of the size of the Canadian regions and may not be successful in federal systems where regions are much smaller in terms of geographic size.[8]

The OECD (2002) reports the results of a questionnaire on the extent of tax-base control in a number of OECD countries. Unfortunately, the results are difficult to interpret since control over the tax base and 100 per cent tax devolution are usually conflated, but where the separation is clear it would appear that control over the tax base is limited in most countries.

BORROWING BY REGIONS IN OTHER COUNTRIES

One way in which regions can supplement their revenue is by borrowing. Here we consider the borrowing behaviour of some sub-central governments. There are four models of how SCG debt accumulation

is disciplined: market discipline, 'collegiate' administrative discipline, rules based discipline and borrowing targets set by CG.[9] None of these is perfect.

A few high-income countries allow sub-central government borrowing disciplined by-and-large by capital markets. These include Canada, Finland, Portugal and Sweden. Four conditions are necessary for effective market discipline. Markets must not be required to treat governments as privileged borrowers; there should be adequate information flow to lenders on sub-central government financial and economic conditions; bailout should be excluded, to prevent moral hazard; and borrowers should have in place institutional arrangements that promote adequate response to deteriorating credit ratings should these occur.[10] Given the high level of development of UK financial markets, one might think that such a system could work here. But there are dangers: even in such a highly developed market economy as Canada, market discipline has not been tight when judged by the rapid increase in provincial indebtedness and deterioration in provincial credit ratings. Only with a lag of more than a decade have the most indebted provinces acted meaningfully to contain growth in their indebtedness.[11] There is a warning here in that the efficiency gains expected from tax devolution may not appear very rapidly, and this might be construed as an argument against fiscal autonomy within the Union.

Rules-based systems – where the rules are specified in laws – are in place in the USA, Spain and Japan. Thus, borrowing at some levels of sub-central government is limited to the estimated debt service capacity of a sub-central government or to some other indicator of creditworthiness. A rules-based system also has the advantages of transparency and evenhandedness. The main disadvantage of this system is that sub-central government may attempt to circumvent the rules by, for example, reclassifying current spending as capital spending or moving some spending off balance sheet.

In a collegiate administrative system the centre and the region agree what is thought to be reasonable borrowing limits within dimensions such as the perceived needs of SCG, the overall fiscal balance and macroeconomic condition. There is an obvious political dimension in the bargaining process that may promote short-term political interests at the expense of excessive borrowing by sub-central government. Indeed, the Australian system of administrative controls – whereby the federal and state governments agree borrowing limits in the Loan Council, has been supplemented with efforts to introduce some market-type discipline.[12]

A fourth debt management arrangement is that of direct control of sub-central government borrowing by central government. This is the system in effect in the UK whereby central government annually approves borrowing limits for local authorities and restriction may be placed on the

loan characteristics including the term and type of loan.[13] Inflexibility is a possible disadvantage of this method of control, especially given informational advantages on local needs that sub-central government may possess in comparison with central government.

In sum, the main message of this chapter is that the vertical fiscal imbalance that we observe in the UK is rather at odds with experiences elsewhere in Europe as well as with non-European countries with federal arrangements. In particular, other countries place much greater reliance on addressing vertical fiscal imbalances using expenditure and income taxes, rather than relying almost exclusively on property taxes, and bloc grants. The version of fiscal autonomy proposed in Chapter 6 finds its closest counterpart in the fiscal devolution settlements within Spain, particularly the experience of the Basque Country. Since a recent judgement by the European Court of Justice has established the legality of the Basque Country having its own tax system, European competition law cannot disqualify the Basque country, or presumably any other similar region, from cutting corporation and other taxes (possibly giving an unfair competitive advantage to firms in the region) if its legislatures had sufficiently broad legislative competences. Since it is the high court of the respective region that would decide on the latter, and as Scotland already has its own Parliament, and had one for centuries prior to the Act of Union, it is hard to imagine that Scotland would not be seen as being sufficiently autonomous to have its own tax system.

NOTES

1. OECD (2002, table 3.6).
2. See Gerard (2001).
3. http://www.taxautonomy.org/?page_id=2.
4. This and the next paragraph is based on Gordo and Hernandez de Cos (2000).
5. These findings are drawn from Robson and Poschmann (2001).
6. See Gendron et al. (2003).
7. See Robson and Poschmann (2001).
8. See Norregaard (1997).
9. This characterization is based on Ter-Minassian and Craig (1997).
10. See ibid.
11. See ibid; and Krelove et al. (1997).
12. See Craig (1997), and Ter-Minassian and Craig (1997).
13. See Potter (1997).

9. Empirical evidence: tax devolution and prosperity

In this chapter we consider the empirical evidence on the effect of fiscal devolution on economic growth and on the size of government. The former topic has two aspects – the public and the private. The public aspect simply relates to the effect of fiscal devolution on allocative efficiency, redistribution and macroeconomic stability and the consequent impact of changes to these components on economic growth. For example, fiscal decentralization could improve allocative efficiency by releasing resources which are then more efficiently employed in the private sector, or the existing employment of resources in the public sector could be made more efficient thereby increasing economic growth. The private aspect relates to the effect that the devolution of tax levers – such as corporation tax – can have on private sector incentives and hence on economic growth. In this chapter we also look at the empirical evidence on the role of fiscal decentralization in affecting the size of the public sector.

Since the debate on fiscal decentralization only really took off in the 1970s – beginning with Oates (1972), and actual decentralization only became a trend in the last two decades, it is perhaps not surprising that the empirical literature on the fiscal decentralization–economic growth relationship is relatively recent, itself being kicked off by Oates (1995). Since then there have been approximately 15 studies on the link between fiscal decentralization and economic growth. These studies rely on cross-sectional, panel and purely time-series data sets applied to groups of countries, or single country analyses. The latter studies use either time-series data or cross-sectional data on regions within a country.

As will be shown shortly, the empirical evidence on the efficacy of fiscal decentralization is somewhat mixed. We will argue that the reasons for this lie not in the idea that incentives are irrelevant to economic progress (increased economic efficiency and higher living standards due to faster economic growth), but to two other things: problems with econometric methodology, especially problems with two-way causation (fiscal decentralization causes growth and growth causes fiscal decentralization); and

with the quality of the data sets employed in empirical studies. These issues create very real technical problems that cannot be ignored by a serious researcher.

Moreover, there is another factor that complicates the relevance of the extant empirical evidence on the effect of fiscal decentralization on economic growth for the Scottish case. It is true that fiscal decentralization on the side of government spending has already gone very far in Scotland – it is the financing of this spending that by-and-large has not been decentralized and is, of course, the subject of this book. Now, it can be argued that the decentralization of spending, irrespective of whether financing is decentralized or not, might reduce economic efficiency and/or the rate of economic growth of a region of a country. For example, a well known argument is that economies of scale in the production of public goods might be lost when production is broken down into several sub-central production units – so raising costs of production; but, to repeat, this is due to an expenditure–devolution decision, not a financing decision.

Furthermore, a decade ago it was decided that the Scottish Parliament and Government would have power over these spending decisions. So if it was subsequently found that economic efficiency or the rate of economic growth had declined this would have to be laid at the door of the decision to decentralize spending. Thus, a problem with the econometric studies cited below on the fiscal decentralization–economic growth relationship is that they do not necessarily distinguish between the devolution of spending and the devolution of financing (taxing) decisions. Indeed, they usually use devolved expenditure as the key explanatory variable; with few exceptions they do not separate out, as is necessary to understand the case of devolving more financing to Scotland, the independent effects of spending devolution and financing devolution. Thus, extant econometric results have to be taken with a pinch of salt as far as Scotland is concerned.

Also, which expenditure policies a sub-central government chooses may themselves contribute to lower economic efficiency. For example, it has been argued in some quarters that competition between hospitals or between schools will create higher benefit–cost ratios. Or, that requiring students to pay some of the pecuniary costs of their higher education (rather than almost none) may well create a better incentive alignment between taxpayers that, presumably, want hardworking well-educated students and the students themselves who, realizing that they have to repay some of the costs of their higher education, may be motivated to compete through educational achievement for higher paying jobs.

FISCAL DECENTRALIZATION AND ECONOMIC GROWTH – THE PUBLIC SECTOR PERSPECTIVE

The Empirical Framework and some Data Issues

The theoretical workhorse used to analyse empirically the effect of fiscal decentralization on economic growth is the endogenous growth model of Barro (1990), in which the production process has multiple inputs, including private and public spending. Such an approach is helpful since it facilitates a relatively rich menu of control variables, thereby minimizing the effect of omitted variable bias. The dependent variable in the growth regressions is usually the average growth rate of real GDP per capita, although a number of variants have been used, such as the log first differences of real GDP and total factor productivity growth. A variety of explanatory fiscal decentralization variables have been used, focusing mainly on the expenditure side of the decentralization equation. Most authors use the budget data approach and approximate the degree of fiscal devolution using the share of sub-central government expenditure (or revenues) in general government expenditure (or revenues), net of intergovernmental transfers, sourcing the data from the Government Finance Statistics of the IMF. More specifically, and from the expenditure side in equation (9.1), fiscal decentralization (FD) may be measured as the share of sub-central government (SCG) expenditure in total government expenditure net of financial transfers:

$$\mathrm{FD} = (E_{\mathrm{SCG}} - Tr)/E_{\mathrm{CG}} \tag{9.1}$$

where E_{SCG} is expenditure by SCG, Tr is financial transfers to SCG from central government (CG) and E_{CG} is expenditure by CG. Thus, a decrease in transfers relative to E_{SCG} would raise the degree of FD (so increasing vertical balance) as, presumably, taxes at the level of SCG would have to increase. Thus, to be clear about the questionable relevance of the empirical studies referred to above, what we are discussing in this book is raising fiscal decentralization by reducing transfers (Tr) in equation (9.1); which may have quite different economic effects compared to raising fiscal decentralization by allowing a sub-central government to take command of greater public spending *and* its own taxes more-or-less simultaneously. The Scottish case is not at all a simultaneous transfer of spending and taxing powers to sub-central government because the transfer of spending has already occurred; and any negative effects of this spending transfer on efficiency and economic growth are already built in. Unless the econometric studies distinguish between (a) tax-only devolution – what this

book is about; and (b) simultaneous spending and tax devolution, any negative effects from the spending devolution will confound conclusions drawn about the desirability of tax-only devolution.

Alternatively, fiscal devolution can be measured from the revenue (R) side as:

$$\text{FD} = (R_{\text{SCG}} - \text{Tr})/R_{\text{CG}} \tag{9.2}$$

So a rise in SCG revenues relative to transfers raises the degree of FD (vertical balance). The same caution must be stated about the relevance of estimation results derived from this equation as were mentioned with respect to equation (9.1). What we are discussing and recommending in this book is an increase in fiscal decentralization caused by a reduction in transfers (Tr) from central government. However, fiscal decentralization can also rise if sub-central government revenues, R_{SCG} (mainly taxes), rise relative to transfers (Tr) – which would occur if sub-central government spending is also increasing along with the taxes it is raising. When fiscal decentralization is rising for this latter reason, again, any negative effects of increased sub-central government spending should not be 'blamed' on the increased taxing element. And, to repeat, in the Scottish case our interest is in tax-only devolution not spending and tax devolution because the spending part has already occurred.

Moreover, it ought to be emphasized that we and others are of the opinion that spending devolution to Scotland has not been accompanied by any notable efficiency properties. Indeed, we think that in the absence of much tax devolution, spending devolution has led to inefficiency in government spending in Scotland – especially, as MacKay and Bell (2006) indicate in its bloated level and in the allocation of resources between the Scottish public and private sectors.

As we saw in the previous chapter, the UK has one of the lowest degrees of fiscal decentralization of any of the countries we considered. Thus, even though expenditure is high so are transfers, or, Scottish revenues are small relative to transfers.

The most popular data sets used in the fiscal devolution/growth regressions are either pure cross-section or panel data sets, which adds a time-series dimension to the cross-sectional dimension thereby increasing the statistical power of the test and it also has the advantage that country specific and time invariant characteristics can be controlled for using fixed and time effects.[1] Data of an annual frequency are normally used in panel data sets. In addition to regressions based on panel and cross sectional data sets, Ordinary Least Squares and variants thereof are used to implement the growth accounting procedure (see, for example, Thießen, 2000).

Cross-sectional/Panel Results on Groups of Countries

The cross-sectional data set of Oates (1995) consisted of a mix of 43 industrialized and developing countries, and he found that the average share of central government spending in total government spending in this data set was 65 per cent for the industrialized countries and 89 per cent for the developing countries: industrialized countries therefore seem to have much more fiscal decentralization than developing countries. Oates reports a statistically significant and positive relationship between FD and economic growth: therefore countries with high per capita income, which have enjoyed sustained periods of economic growth to reach their current income levels, have greater levels of fiscal decentralization than low growth/low per capita income countries. But this raises the central issue in this kind of study, namely: is fiscal decentralization a cause or consequence of growth? The evidence on causality is inconclusive.[2] As we shall see, more recent studies, based on regression analyses,[3] report that there is a statistically significant relationship between fiscal decentralization and growth but, intriguingly the relationship is sometimes negative: increased fiscal decentralization is associated with slower growth. However, in general, these studies are unsophisticated in the way they treat causality and it is possible that the negative result is spurious. We return to this point at the end of this section.

Davoodi and Zou (1998) report a negative, although statistically insignificant effect of fiscal devolution on economic growth for developing countries and no clear relationship for developed countries. Woller and Phillips (1998) find no significant and robust relationship between fiscal devolution and economic growth for less developed countries and they therefore essentially confirm the results of Davoodi and Zou. Yilmaz (1999) partitions his data base into unitary countries and those with a federal structure. He finds for unitary countries a significant positive impact of fiscal decentralization on per capita growth but no clear relationship for federal countries. Thießen (2000) tests for a 'hump-shaped' relationship between fiscal decentralization and economic growth which simply put is: both low and high levels of decentralization are not optimal but some midway point is likely optimal. The theoretical rationale for such a humped relationship is that with low levels of decentralization unconsidered, or at least uncatered for, preferences produce inefficiencies in the provision of public goods, which inhibits, in turn, economic growth. With too high a level of decentralization inter-jurisdictional externalities cannot be internalized and economies of scale are not realized, with negative growth effects the outcome. Thießen finds that the hump-shaped relationship is particularly pronounced in countries with the highest per capita

income, while there is evidence that low per capita income countries grow linearly with higher decentralization degrees.

Thießen (2003) follows up on his earlier study of the hump-backed nature of the FD–economic growth relationship using a panel data base for the high income OECD countries. For such countries the degree of fiscal decentralization has converged over the last 30 years towards an intermediate level. The theoretical arguments for and against fiscal decentralization point to explanations for this tendency, because both extreme decentralization and extreme centralization are associated with disadvantages for economic growth. Hence, the observed trend of convergence in the high income OECD countries should be growth-promoting. Thießen (2003) analyses the long-run empirical relationship between per capita economic growth, capital formation and total factor productivity growth, and fiscal decentralization for these high-income countries. Thießen's results supports the view that the relationship is positive when fiscal decentralization is increasing from low levels, but then reaches a peak and turns negative. A policy implication of this is that policymakers in several countries with relatively low degrees of fiscal decentralization could possibly mobilize growth reserves by increasing it.

Feld and Dede (2005) empirically study the impact of fiscal federalism on economic growth for high income countries using a panel data for 19 OECD countries over the period 1973–98. They use new data on the decentralization of tax revenue in which sub-central fiscal autonomy is captured to different degrees. According to their results, tax autonomy does not have a robust impact on economic growth while an extensive participation in joint taxation systems seems to impede economic growth.

Single Country Studies

(1) China

Lin and Liu (2000) demonstrate that China's overall (national) growth rate is positively related to fiscal decentralization and they attribute this to efficiency improvements of resource allocation rather than fiscal decentralization inducing more investment. However in contrast Zhang and Zou (1998, 2001), using provincial data, find that there is a negative association between China's provincial growth and fiscal decentralization and they argue that key infrastructure projects which have nationwide externalities, which are too decentralized in China compared to other countries are the key reason for this result. So for China the conclusion is that fiscal devolution has differential effects at the local and national levels.

(2) United States

Xie et al. (1999) report an insignificant relationship between local and state spending shares and economic growth, although in terms of their theoretical model they argue that insignificant fiscal devolution shares are actually consistent with growth maximization.

Akai and Sakata (2002) use state-level data for the United States to estimate the effect of fiscal decentralization on economic growth more objectively than in previous (cross section studies), because the data set exhibits little cultural, historical and institutional variation. They also provide the finding that the definition of fiscal decentralization is important in relation to the effect of fiscal decentralization on economic growth.

Akai et al. (2004) also use state-level data for the US, their novelty being the classification of the states set into high, medium and low degrees of fiscal devolution. They find a statistically positive relationship between fiscal devolution and economic growth regardless of the classification, thereby indicating that fiscal devolution is conducive to growth regardless of the degree of decentralization (note their categorization into high medium and low is from the expenditure side of the decentralization equation).

Stansel (2005) uses a new cross-sectional data set for the United States, comprising 314 US metropolitan areas to show that there is a positive and highly significant relationship between fiscal decentralization and economic growth: specifically, a one standard deviation increase in decentralization produces a 2.5 per cent increase in per capita income growth.

(3) Germany

Rather than use a fiscal devolution measure, Behnisch et al. (2003) use a measure of fiscal centralization to asses the impact of public sector centralization in Germany on total factor productivity growth and they are able to identify a statistically positive effect of overall centralization on total factor productivity growth.

(4) India

Using Indian regional data, Zhang and Zou (2001) find a positive effect of the per capita fiscal devolution shares on Indian regional economic growth, although the effect is only statistically significant when the FD measure used is the per capita revenue share.

(5) Russia

Using data on the Russian regions post break-up of the Soviet Union, Desai et al. (2003) show that tax retention, as a proxy for fiscal autonomy, has shown a significant positive effect on industrial recovery of the Russian regions.

(6) Spain

Carrion-i-Silvestre et al. (2008) examine the Spanish fiscal decentralization–economic growth relationship at both the aggregate and regional levels. Their main conclusion is that at the aggregate level, the process of decentralization of responsibilities to autonomous communities (ACs) has not had significant effects on Spanish economic growth when fiscal decentralization is measured in terms of revenue and investment shares, while a statistically significant negative effect is found when decentralization is measured through expenditure shares. When they use the regional data they find that fiscal decentralization at the AC level has a positive effect on economic growth for those ACs with the highest levels of fiscal and institutional decentralization, but the opposite effect is found for those ACs with the lowest levels of competencies. Decentralization at the local level has a significant positive effect for ACs with complete fiscal autonomy.

The Spanish case is also examined by Gil-Serrate and Lopez-Laborda (2006). They define revenue decentralization as actual sub-central government control (free of central government manipulation) and divide it into high, medium and low categories. The dependent variable is GDP growth or per capital GDP growth, and control variables are included to pick up the effects of non-fiscal variables on regional economic growth. They find the hypothesized positive relationships between revenue decentralization and economic growth, but only one is statistically significant – that for low fiscal decentralization. However, what they are able to include in the 'high' revenue category had to be rather narrowly defined as administrative fees, user charges, income from business operations and property (but not corporation taxes as control was not devolved), and divestment of property investments. Thus, devolution of income taxes is not found in the high income category, nor VAT revenues.

Gil-Serrate and Lopez-Laborda (2006) do in fact come up with some other very interesting and robust econometric findings concerning the relationship between revenue decentralization and the *rate of investment* in the Spanish autonomous communities. Thus, when the dependent variable is the rate of investment at the regional level, they find a positive and highly significant relationship with their measures of revenue decentralization. This finding would seem to support the 'crowding out' hypothesis of MacKay and Bell (2006) who argue that high public sector spending in Scotland is squashing the private sector as it absorbs so much labour.

Some Econometric Issues

The forgoing overview of the relationships between fiscal devolution and economic growth confirms the earlier surveys of Martinez-Vazquez

and McNab (2003) and Breuss and Eller (2004) and we follow the latter authors in our summary of some of the remaining econometric issues in these empirical studies.

In estimating the growth–fiscal devolutioin relationship, most authors apply the sensitivity analyses proposed by Levine-Renelt (1992), which distinguishes between three groups of explanatory variables: base or control regressors (which are always included in the regression); the variable(s) of interest (fiscal decentralization); and a subset of regressors identified by past studies as potentially important explanatory variables for economic growth. Under the Levine–Renelt test a variable is deemed to have a 'robust' effect on economic growth if 'it remains statistically significant and of theoretically predicted sign when the conditioning set of variables in the regression changes'. But as Sala-i-Martin (1997) has stressed, misspecification biases may still be present in regressions which have followed the Levine–Renelt approach because they may miss some important control variable – which is likely to be a bigger problem than introducing irrelevant variables. Also the Levine–Renelt test is in fact 'too strong for any variable to pass it' (Sala-i-Martin, 1997, p. 179).

A second important issue with existing empirical studies concerns the measurement of the fiscal devolution variable. The World Bank, for example, has criticized the IMF's Government Financial Statistics (GFS) database, in terms of its lack of details on expenditure-autonomy and own-source revenue. In other words, it is by no means clear that GFS data measures the variables of interest – actual sub-central government spending or financing autonomy from central government. There are also deficiencies regarding reported data for the sub-national levels and the paucity of information for determining the dispersion among sub-national regions and it is therefore important that more precise measures of FD are calculated (Ebel and Yilmaz, 2002; and Gil-Serrate and Lopez-Laborda, 2006). Both the World Bank and the OECD are making important advances in this regard.

We noted above that there are potential simultaneities, or bi-directional causality, between fiscal decentralization and economic growth and this has not been sufficiently considered within theoretical models or in the extant empirical literature discussed above. For example, as Breuss and Eller (2004) note, if fiscal decentralization is seen as a superior good (due perhaps to quality gains in the supply of public goods) and has a higher income elasticity, then higher levels of income per capita can produce the basis for additional expenditure use for the creation of a new level of decentralization. So in this example, increased per capita income would be expected to have a positive effect on fiscal decentralization and therefore this kind of effect would mean fiscal decentralization is an endogenous

variable and any failure to control for such endogeneity would result in a spurious correlation.[4] Since few if any studies do indeed control for such edogeneity the existence of spurious correlation must be a very real one in the kind of studies discussed above.

FISCAL DEVOLUTION AND THE SIZE OF GOVERNMENT

Grossman (1989) analyses one way in which governments can circumvent the discipline of a competitive system of fiscal federalism, by using intergovernmental collusion in the form of intergovernmental grants. Grants, it is argued, serve to encourage the expansion of the public sector by concentrating taxing powers in the hands of the central government and by weakening the fiscal discipline imposed on governments forced to self-finance their expenditures. The results reported suggest that intergovernmental grants do encourage growth in the public sector. The results offer further support for the use of monopoly government assumptions in public sector modelling.

Fiva (2006) conducts an econometric analysis of a panel data set from 18 OECD countries on the relationship between fiscal decentralization and the size of government. The main novelty in the paper is that the author uses improved data on tax revenue decentralization and he shows that fiscal decentralization matters for both the size and composition of government spending. Specifically, tax revenue decentralization is associated with a smaller public sector, while expenditure decentralization is associated with a larger public sector. The results indicate that the former effect is driven by a reduction in social security transfers, while the latter effect is driven by increased government consumption.

Shadbegian (1999) uses a state-level panel data set (1979–92), encompassing all levels of government, to test the applicability of three theories concerning government size: the Wallis and Brennan/Buchanan versions of the decentralization hypothesis and the Brennan/Buchanan collusion hypothesis and to determine which one, or ones, should be used when modelling the public sector in the United States. The results indicate that as fiscal decentralization increases, state and local public expenditures increase and federal government expenditures decrease, as theorized by Wallis, whereas total government spending decreases, as predicted by Brennan and Buchanan. It is also shown that collusion among the different levels of government leads to an increase in overall government spending and an increase in spending at each individual level of government evidence supporting the Brennan/Buchanan collusion hypothesis.

Thus, this study shows that collusion among the different levels of government weakens the disciplining power of fiscal federalism. Therefore, fiscal decentralization alone may not act as a binding constraint on Leviathan type governments. Accordingly, it is concluded that each theory contributes to the explanation of public sector size, implying that each should be taken into consideration when modelling the public sector in the United States.

In his survey of the literature of fiscal federalism and the size of government Kirchgaessner (2001) concludes that there is some evidence that fiscal federalism leads 'ceteris paribus' to a smaller size of the government and he also notes that there are also political institutions which have an impact on the public budgets, and there are some interactions between the different institutions.

Rodden (2004) revisits the influential 'Leviathan' hypothesis, which posits that tax competition limits the growth of government spending in decentralized countries. Rodden uses a panel data set to examine the effect of fiscal decentralization over time and within countries, and to distinguish between decentralization that is funded by intergovernmental transfers and local taxation. Rodden first explores the logic whereby decentralization should restrict government spending if state and local governments have wide-ranging authority to set the tax base and rate, especially on mobile assets. He finds that in countries where this is most clearly the case, decentralization is associated with smaller government. Second, consistent with theoretical arguments drawn from welfare economics and positive political economy, Rodden shows that governments grow faster as they fund a greater portion of public expenditures through intergovernmental transfers.

ALLOCATIVE EFFICIENCY AND THE PRIVATE SECTOR

As we noted in earlier chapters, a key element of our fiscal autonomy proposal concerns the ability of the Scottish Government to alter economic incentives to the private sector once it has the means to do so. One key area in which this could occur is by lowering corporation tax. Although there is much anecdotal evidence suggesting a link between lower corporation tax and economic growth (take for example the Irish experience) such evidence is often criticized as being country specific and therefore not directly applicable to Scotland. This point has though been addressed in an interesting and influential econometric study by Lee and Gordon (2005) who use a panel data set of 70 countries, over the period 1970–97,

and demonstrate that lower rates of corporation tax contribute to faster rates of economic growth. In particular, after controlling for other growth inducing factors, lowering corporate tax rates by 10 per cent can increase the growth rate of real GDP by between 1 and 2 per cent per year. Lee and Gordon (2005) also address the well-known lack of systematic relationship between tax burdens and rates of economic growth. They suggest that high rates of economic growth can lead to higher tax burdens due to the need to build infrastructure, and that this can confound a null hypothesis of an inverse relationship between tax burdens and economic growth rates.

An argument against cutting corporation taxes, at least in the short run, is that with other things equal (that is, other spending and taxes staying the same) the Scottish Government's fiscal position would worsen relative to the pre tax cut situation. If, say, Scotland ran a fiscal deficit as a result of cutting corporation tax, it could always borrow on capital markets to finance the deficit until the increased tax revenues from the improved economic growth kicked in (in Ireland, for example, there has been an approximate sixfold increase in corporation tax revenues as a result of the tax cuts).

An alternative way in which any potential fiscal shortfall could be met would be through a 'headquarters effect'. Clearly the longer-term objective of cutting corporation tax would be to attract new corporate investment – increasing the capital stock with the latest technology built in – in Scotland thereby increase total factor productivity and improving the underlying growth rate. However, the cut in corporation taxes would also make it attractive to companies to relocate their headquarters to Scotland to take advantage of the lower tax rates.

Recently there is quite a lot of evidence that the low corporation tax regime offered in Switzerland, combined with the highly educated workforce and other factors available there, have led companies to relocate their European headquarters to Switzerland (for example, the European headquarters of Apple relocated from London to Geneva as a direct result of the more advantageous corporation tax regime available in Switzerland). There are two potential sources of revenue from such a relocation. One is the increased corporation tax revenues that the Scottish Government would obtain from any profits that were channelled through the relocated company's headquarters and the other would be any increased income tax revenues associated with the new employment created by the relocation.

A potential third source of tax revenue would arise for companies who face being taxed on their worldwide income (which is the case in the UK and the US). For example a multinational company with its headquarters in the UK will in all likelihood be repatriating profits from foreign countries with relatively low corporation tax regimes and these

profits will be taxed again once they are transferred back to the UK. This additional tax creates an incentive for a multinational company to relocate its headquarters to a country which does not tax foreign profits (or taxes at a lower rate) earned in a low corporation tax country again. Voget (2008) considers a sample of 213 multinational companies that relocated their headquarters over the last decade and compares them to a control group of 3395 multinationals that have not done so. He finds that the additional tax due in the home country has a significant effect on the relocation decision. The empirical results indicate that if this additional tax increased by ten percentage points, an additional 2 per cent of multinationals would be induced to relocate to an exemption country.

Some added (indirect) insights on the effect of a tax burden on growth may be gleaned from the ZEW IBC taxation index, which determines and analyses the effective tax burden of companies and on highly skilled manpower in 20 European countries and the United States of America. The 2005 study clearly shows that international tax competition has reduced the company tax burden across countries (relative to the 2003 study). The Nordic countries are shown to tax capital at relatively low rates, relative to the European average, but tax labour at relatively higher rates. Ireland has adopted a similar policy but with a much lower tax burden on capital. The tax burden on both capital and labour is relatively low in the Eastern European Countries. One interesting aspect of this study is that it shows the tax burdens on capital and labour for each of the Swiss Cantons and these are extremely low compared to other continental countries and comparable to the tax burden in the new accession countries.

CONCLUSION

The empirical evidence on the fiscal devolution–economic growth link produces a rather mixed outcome: some studies find a positive association – more fiscal decentralization stimulates economic growth – while others in fact find a negative relationship. However, and as we have made clear, such a mixed outcome is perhaps to be expected given the rather rudimentary statistical and econometric techniques used (that is, important econometric issues of simultaneous equation and omitted variable biases are not addressed) and also the relevance of such tests for the Scottish case is likely to be limited given that most focus on the expenditure side of the balance sheet rather than the revenue side which is where our fiscal autonomy proposal bites. Until the econometric and measurement issues are appropriately addressed, we are unlikely to be able to pin down the true relationship between fiscal decentralization and economic growth, especially

concerning the devolution of increased tax powers. In future attempts at sharpening the point estimates of the effect of fiscal devolution on economic growth, Breuss and Eller (2004) have argued that effort should be made to formalize the primary impact of fiscal devolution on the allocative efficiency, equity and macrostabilization functions of fiscal policy and then the linkages between these three functions and economic growth can be constructed. In order to properly address the issue of bi-directional relationships between fiscal devolution and economic growth, research should be devoted to examining the various channels that interfere with the relationship. Simultaneity issues also need to be addressed by locating variables which exogenously determine FD and economic growth and population may be a candidate here. We believe that once these theoretical and empirical issues have been addressed a clear positive association between fiscal devolution and economic growth will emerge, particularly when the totality of decentralization – both spending and revenue – is taken into account.

We read the relatively small literature on the effect of fiscal devolution on the size of government as indicating that decentralization of tax revenue is associated with a smaller public sector, while expenditure decentralization is associated with a larger public sector and that any potential efficiency gains of fiscal devolution on the size of government may be thwarted by collusion amongst different levels of government.

The empirical literature on the effect of tax devolution on private sector incentives, supports the view that a cut in corporation tax can have a positive effect on economic growth and any short run shortfall in government revenues a result of such a tax cut can be offset by government borrowing or by the so-called headquarters effect. We believe this to be an important and significant result and one which further supports our preferred system of fiscal devolution, namely fiscal autonomy.

NOTES

1. We sometimes use the term ‘fiscal decentralization’ instead of ‘fiscal devolution’.
2. See, for example, Oates (1999); and Bahl and Linn (1992).
3. See, for example, Davoodi and Zou (1998), Xie et al. (1999), Zhang and Zou (1998) and Thießen (2003).
4. Several studies have indeed demonstrated that fiscal devolution does depend on the level of economic development (see, for example, Oates (1985); and Bahl and Nath (1986)).

10. A separate currency for Scotland?

A possible reason for the decentralization of fiscal policy in the UK, particularly the macroeconomic stabilization function, is a consequence of the monetary union that exists within the UK. The so-called optimum currency area literature suggests a number of criteria that should be satisfied if a country or region relinquishes control over its monetary policy. If these criteria are not satisfied, or are only partly satisfied, then decentralized fiscal policy can act as a substitute. Of course, if the criteria are not satisfied this begs the question of whether Scotland should in fact be part of the UK monetary union. In this section we consider the implications of the optimum currency area literature for tax devolution, issues of macroeconomic risk sharing within a monetary union and the economic implications of Scotland leaving the UK monetary union.

MONETARY UNION, TRADE CREATION AND EXCHANGE RATE BEHAVIOUR

The logic of having a common currency between two regions is that by simultaneously reducing transaction costs, currency risk and the opacity of relative prices, it encourages trade. Glick and Rose (2002) estimate the effect of currency union membership on trade integration using a large data set of countries that have *left* currency unions. They find that trade integration with the remaining members falls by about one-half from the boosted level associated with monetary union in the year or so immediately following exit. Accordingly, if Scotland were to leave the UK monetary union, it might experience a large and rapid fall in its trade with its current largest trade partner – the Rest of the UK.[1]

There is a large theoretical and empirical literature that emphasizes the deleterious effects on both exchange rate volatility and real exchange rate misalignments on trade and investment (for example, MacDonald, 1999 and 2000). Moreover, Buiter (2000) and Layard et al. (2000) have argued that due to high international capital market integration exchange rates tend to be a source of shocks rather than acting as a shock absorber (see also Artis and Ehrmann, 2000). Regions should therefore pool their monetary policy in instances where they have high capital mobility. Given the

highly integrated UK financial system, Scotland would seem to meet this criterion.

The findings of Besedes and Prusa (2003) suggest that it is difficult for countries to establish new trade linkages.[2] This is perhaps not surprising given that the establishment of new trade linkages at the firm level requires costly search for suitable business partners and the possible abandonment of present trade partners in other countries with whom search costs are already sunk. These findings may help to explain why Irish trade intensity with the UK has not changed by much following the exit of the Republic from the UK monetary union (Thom and Walsh, 2002). While it is quite possible that Scotland would experience the same effect as Ireland should it too leave the UK monetary union, this is not to say that it would not face a long, and perhaps painful period of trade transition away from its trade partners in the remaining UK monetary union. Indeed, according to Glick and Rose (2002) time lags in the monetary union exit-trade intensity reduction relationship can be quite long. Thus, a possible scenario is that even outside the UK monetary union, Scotland's trade intensity with it remains high for many years, but in the meantime Scottish business is caught between the costly effects of exchange rate volatility on its trade with the remaining members of the UK monetary union, and incurring the costs of finding new trade partners in the EU and elsewhere. Thus, the trade adjustment costs that Scotland would incur over the long-term from leaving the UK monetary union would be drawn out and might be unacceptably high. Indeed, given that much of Scottish trade is in the financial services sector, and that this sector trades almost exclusively with the Rest of the UK, it is highly probable that this sector would rapidly shift its operations over the border to England to avoid the vagaries of a flexible exchange rate that would almost inevitably follow Scotland's exit from the UK's monetary union.

Another interesting aspect of Scotland's choice of currency area is the finding of Frankel and Rose (2000) that the beneficial effects of a currency union work *only* through trade creation and not through macroeconomic influences or the tying of monetary policy to a non-inflationary trade partner. They also note that an implication of trade creation being the main benefit of belonging to a currency union (something that squares with the theoretical considerations in Hughes-Hallett and Piscitelli, 2002), is that a currency union should be with the largest trade partner rather than some other country, even if that country was a low inflation country.

This brief overview suggests that it is in the interests of Scotland to maintain its links with the UK monetary union. Given this, does the monetary union within the UK constitute an optimum currency area and what are the implications of the monetary union for tax devolution?

THE OPTIMUM CURRENCY AREA CRITERIA AND THE CASE FOR TAX DEVOLUTION

In a monetary union a region gives up two instruments of macroeconomic management – the exchange rate and monetary policy. This may not matter from a macroeconomic point of view – maintaining full employment and a stable price level, given one of two conditions: either macroeconomic shocks are symmetric with the rest of the currency area, or, if asymmetric, labour is mobile between regions.[3]

Although labour mobility is clearly very high in the UK context, there are a number of issues relating to this criterion that are worth noting. First, although labour may be willing to migrate, it may not have the necessary skills to move and it may take a considerable time for agents to retrain. Indeed, it is possible with missing markets that people cannot in fact retrain. Therefore, a region could suffer a prolonged period of unemployment. Also, it is not entirely clear in the context of the UK that labour mobility is always going to be the best shock absorber. For example, over the years there has been large net migration from Scotland. Although it is difficult to cost, to the extent that this labour goes to the already congested parts of the UK it may not be the optimal solution as it contributes to the rather unbalanced economy and housing market in the UK. Also, Scotland's well known demographic imbalance (see Heckman and Masterov, 2004; Wright, 2004) suggests that incentives might be given to labour to discourage it moving outside Scotland and, indeed, to try to attract it to return.

A good deal of work has been done on the symmetry of macroeconomic shocks at the regional level. Research on business cycle correlation suggests that correlation is higher within countries than between countries (De Grauwe and Vanhaverbeke, 1993; Forni and Riechlin, 2001; Barrios et al., 2001; Clark and van Wincoop, 2000). Barrios et al. (2001) demonstrate that cyclical heterogeneity amongst the UK regions is not great, the average correlation coefficient being approximately 0.7. Clark and van Wincoop (2000) confirm that inter-regional business cycle correlation is high – also at about 0.7 – for regions within countries, but only in the range of 0.2 to 0.4 for regions at similar levels of economic development across countries. Usefully Rose and Engel (2000) present evidence that membership of a monetary union tends to increase business cycle correlation by about 0.1, and conclude that 'while economically and statistically significant, the size of this effect is small in an absolute sense' (p. 19). This would seem to reinforce the point made in the previous section regarding Scotland's position in the UK monetary union.

Theoretical and empirical work on capital market integration and the degree of industrial specialization is somewhat at odds with the finding that leaving a monetary union will reduce business cycle correlation. As capital market integration is relevant to the Scottish context some consideration of it is in order. Heathcote and Perri (2002), and Kalemli-Ozcan et al. (2000, and references therein) argue on the lines that in a financially *isolated* country a high variance of GDP encourages the development of a well diversified economy as a means of insuring against production risk – so reducing the variance of income and consumption. But another type of production risk insurance is through integrated inter-regional and/or international capital markets in which capital flows reduce the variance of consumption. Scotland surely does have a high degree of capital market integration with the rest of the UK given that so many financial institutions operate in both areas. Thus, interregional borrowing most probably does serve to stabilize Scottish consumption in the face of non-permanent industry-specific shocks.

A testable hypothesis is that national and regional specialization increases as, respectively, international and inter-regional capital market integration increases. Kalemli-Ozcan et al. (2000) find empirical support for this hypothesis. Clearly, these arguments support that of Krugman (1993), who argues that following monetary union increasing specialization in production will cause shocks to become more asymmetric, with the implication that business cycles become less correlated. Moreover, Kose et al. (2003), in finding that globalization (that is, increasing international goods and capital market integration) is not associated with increasing business cycle correlation, suggest that this may be due to the counteracting effects of simultaneously increasing trade and capital market integration.

On the basis of this discussion it might be argued that reduced financial market integration with the rest of the UK – following exit from the UK monetary union – would reduce the degree of specialization of the Scottish economy. Thereby Scotland would have to provide to a greater degree than presently of its own income and consumption insurance against economic shocks. However, it seems plausible to us that:

1. As capital market integration of Scotland with the rest of the UK and/or the rest of the world is likely to remain high, leaving the UK monetary union would have little effect on the degree of specialization of the Scottish economy.
2. That even if capital market integration did fall, the degree of industrial specialization would change only slowly so leaving Scotland's specialized macroeconomy open to asymmetric shocks.

3. Less specialization in the Scottish economy following leaving the UK monetary union would be undesirable because it would represent the unwinding of the allocative benefits of specialization according to comparative advantage.

To summarize this chapter, we have pointed to some disadvantages of Scotland breaking its link with the UK monetary union because of the deleterious effect this would have on its trade and investment. The standard optimum currency area criteria seem to indicate the local stabilizing role of fiscal policy – especially as continued outward labour migration might be thought to be undesirable both for Scotland and the rest of the UK.

The available evidence on asymmetric shocks and business cycle correlations within the UK suggests they are high, and certainly much higher than between countries, but the correlation does not rule out a stabilization role for fiscal policy. For example, the representative figure of 0.7 certainly suggests that a large proportion of stabilization should be conducted from the centre, but it also suggests that there is some scope for stabilization from the periphery as well. This therefore supports the argument made previously that in our preferred fiscal autonomy solution there would have to be some devolution of the macrostabilization role of fiscal policy underpinned by some form of formal or informal stability (depending on whether Scotland was independent or not) pact with the rest of the UK.

NOTES

1. In the most recent year for which there is data, 2000, 51.3 per cent of Scottish exports were to the Rest of the UK, the remainder being to the Rest of the world.
2. They find that the median survival time for a new exporter (product or industry level) to the US is about two years with a large decrease in the probability of survival thereafter. However, the conditional probability of survival increases as survival time increases. The trick therefore is to cross a survival threshold but this is not easy. More work on understanding what is making the threshold so difficult to cross needs to be done.
3. The relevance of interregional labour mobility to the optimum currency area question was first discussed by Mundell (1961). Kenen (1969) argued that the more industrially diversified a country, the less asymmetric would be shocks – something that we take up later in this section. MacKinnon (1963) argued that a high degree of openness – such as with Scotland's trade with the rest of the UK, suggested a fixed exchange rate because changes in nominal exchange rates could not affect the real exchange rate due to an absence of money illusion. With its high dependence on export industries Scotland is clearly an 'open' economy.

11. Conclusion

It is widely acknowledged that public spending in Scotland is over-funded by the bloc grant from Westminster – as measured by any reasonable needs based formula.[1] Moreover, much of this public spending is wasteful (for example as measured by labour productivity in comparable Scottish and English public sectors).[2] Nor is Scottish public spending targeted on promoting economic growth in Scotland, and it is arguable that it crowds out private sector economic growth – which is an aspect of acknowledged Scottish long-term de-industrialization. It can and has been argued, both here and elsewhere, that this overfunding is simply an attempt to return some of the huge oil revenues generated in Scottish waters over the years to Scotland. If this is the case, one of the key themes of this book is that a bloc grant is not a good way to return this largesse.

With the bloc grant settlement, it is almost as if the crafty English found a way to inoculate themselves against the 'Dutch Disease' – a worry sometimes voiced in the 1970s that North Sea oil would so appreciate the pound's exchange rate, that the UK's whole economy would be de-industrialized. One rational and economically sensible way out of this would have been to use North Sea oil tax revenues to build up overseas investments in a sovereign wealth fund, as other countries and regions have done. Another would have been to use the money to re-capitalize the British economy.[3] The actual choice was to spend some of the revenue windfall in Scotland – as justified by a highly questionable 'needs' assessment exercise that somehow found that Scotland should enjoy bountiful public spending, even though Scotland was (and is) the richest region in the northern British Isles. And so it came to pass that, today, the decline of private enterprise in Scotland is lamented (it has had a nasty case of Dutch Disease); while in England private enterprise is in hearty health, or relatively so at least. Not that we think that the English planned things this way; rather it was politically expedient at the time of the needs assessment exercise (1979) to maintain high levels of public spending in Scotland. This was because the Nationalists were on the rise, and they would have only gained in support if public spending in Scotland was cut back at the very time that so many in Scotland believed that it was 'Scotland's Oil'. And so it has been every fiscal year since then. The

rake's progress that we discussed in Chapter 4 was allowed to run and run. Nobody has been willing to face down the big red Scottish public spending machine.

But this is precisely what we have done in this book. We have strongly argued that if Scotland wants to revive its economy, to move its rate of economic growth up from its habitually poor level (even compared with England's), it needs to reform the financing of its public sector and offer sharper incentives to the private sector. We point to two broad choices. First, a system of fiscal federalism (a Scottish tax financing system largely based on *tax assignment*, and a *marginal tax rule* that requires that increases in Scottish public spending financed out of assigned taxes and a residual bloc grant, be financed either by higher taxes or by lower public spending elsewhere on the expenditure side of the budget).

The second broad choice is a system of fiscal autonomy in which Scottish public spending is financed out of Scottish-sources taxes. Fiscal autonomy comes in two flavours: Scotland within the Union – a fiscal autonomy system in which Scotland would properly make payments to Westminster for nationally supplied public goods such as national defence and the diplomatic service; and with independence – the latter of which introducing the most severe budget constraint on Scottish public spending (see Chapters 3 and 4).

Some people argue that fiscal autonomy within the union, or, even, fiscal federalism with its more limited tax devolution to Scotland, would be nothing but a further step on the road to independence. We beg to differ. For one thing creating in 1998 a Scottish Parliament – with its cockeyed fiscal powers – was the first major step that indeed could lead to independence. For another, we think that straightening out the fiscal system, through granting economically efficient tax devolution, far from weakening the Union could strengthen it.

It can easily be argued that the likelihood of independence is far greater compared with bearing down on the bloc grant – cutting it by 10 per cent say. That option has been rejected every year for over 30 years because economies imposed on the Scottish budget by Westminster would be a red rag to the Nationalists. Now that Scotland has its own elected representatives in Holyrood, the Scottish fiscal system – taxing as well as spending powers – should be based in Holyrood, which would, of course, mean that Westminster could no longer be blamed for decisions made in Edinburgh. For this reason we think that harmony within the United Kingdom is likely to be promoted rather than the Kingdom split asunder. Indeed, by 2006, if not before, all four leading political parties in Scotland – Scottish Labour, the Nationalists, the Scottish Liberal-Democrats and the Scottish Conservatives – were in favour of some form of tax devolution

to Scotland. Then in January 2008 the leader of the Liberal-Democrats at Westminster called for tax devolution with the argument that the Nationalists could be stopped by giving more powers to Holyrood and all three unionist parties are now signed up to the Calman Commission which has the issue of the fiscal accountability of the Scottish Parliament at its heart.[4]

Thus, it is that in this book we carefully consider the economic case for tax devolution to Scotland in the form of either fiscal federalism, or, in the form of fiscal autonomy – with or without independence. Our discussion is not intended to be definitive, or the last word on these topics. Rather we hope to have raised the key economic issues which are at the heart of any debate on an appropriate tax devolution system for Scotland. In other words our focus in this book is intended to define the terms of debate on this issue.

FISCAL FEDERALISM

In the case of fiscal federalism we emphasize the assignment and devolution of tax revenues to Scotland. We mean by this that a considerable proportion of taxes levied on Scottish tax bases should be returned to the Scottish budget. We have argued for a balanced tax assignment, which is one that seeks to broadly match identifiable expenditure in Scotland with assigned taxes. The key taxes included in the assignment would be income tax, VAT and corporation tax, and income tax and a package of other taxes would be devolved.

With a fiscal federalist solution, the Scottish budget, however, would continue to be supplemented by transfers from the Westminster budget. This arrangement differs from the current situation whereby public spending is largely financed by a bloc grant from Westminster. This suggestion falls short of fiscal autonomy for Scotland – either in the sense of independence with no shared obligations; or, in the sense of Scotland only making a sovereign contribution for access to shared services without any equalization mechanisms for areas such as social security – meaning that Scotland had control over choice of tax base and of tax rates, and fiscal transfers from Westminster would be minimal.

We have used propositions drawn from the theory of fiscal federalism to argue for a smaller vertical imbalance between taxes retained in Scotland and public spending in Scotland. A closer matching of spending with taxes would better signal to beneficiaries the true costs of public spending in terms of taxes raised. It would also create more complete incentives for politicians to provide public goods and services in quantities and at

qualities that voters are actually willing to pay for. One important feature of our recommendations is what we have labelled the marginal tax rule, by which we mean that for any agreed fiscally devolved package, a decision, for example, by policymakers to raise expenditure in one area has to be matched by an equi-proportionate fall in expenditure elsewhere or by an equi-proportionate rise in taxes. Since from an economic perspective decisions at the margin are crucial for allocative efficiency, we regard this as an essential feature of a fiscal federalist solution for Scotland and we believe this would be achievable through our recommended devolved taxes.

Under the current bloc grant system, the marginal tax cost of spending does not sufficiently figure in political calculations by the Scottish Government and the Parliament as spending is out of a fixed total budget. Moreover, the Scottish electorate is hindered in signalling its desire for local public goods and services since the size of the total budget is determined by a rigid formula set by Westminster. In embarking on a fiscal federalist system a needs assessment exercise would have to be conducted in order to tie down the size of any bloc grant provided by the centre. We are also of the opinion that any legislation creating tax assignment for Scotland should allow scope for further modification of the Scottish fiscal system – along the lines of the Spanish system where regional finances under the law are reviewed every five years.

FISCAL AUTONOMY

In Chapters 6 and 7 we point out that fiscal autonomy – Scotland spends what it raises from its own tax base – offers the sharpest incentives for efficiency in public spending – in getting the balance right between public and private spending in Scotland, and between public spending today and in the future (the so called intertemporal government budget constraint) – and also offers potential efficiency gains for the private sector.

While hardening the budget constraint on decision-makers, the Scottish Executive, MSPs and voters, it has to be admitted that a different sort of trade-off would be faced. Rather than the equity-efficiency trade-off that we discuss in Chapter 2, there would be a trade-off between efficiency in public spending and the variability of tax revenues. The latter would be greater the smaller is any residual bloc grant from Westminster.

Thus, we argue that at the heart of the design of an appropriate fiscal system, at the central or sub-central level, is finding an appropriate mix of the three key economic roles of government, namely: the allocation, or, efficiency role; the equity, or, income equality function; and the macroeconomic stabilization role. Given the current constitutional settlement

in the UK it is our view that these three functions can only be appropriately addressed in a fiscal system which is based on a version of fiscal autonomy.

How does our proposal for fiscal autonomy stack up against the status quo and the fiscal federalist alternative in terms of the efficiency/equity/macroeconomic stabilization functions? As we have argued, we believe our fiscal autonomy proposal is superior to the current fiscal settlement for Scotland in terms of the efficiency–equity trade-off. As we have noted, the current Barnett-based settlement fails on this criterion in that nearly all of the emphasis is on the equity side of the equation and nearly none on the efficiency side. Our fiscal autonomy proposal presents a much better balance – in our view equity would not need to compromised from its current position, but what would be sharply improved is the efficiency function, in terms of both the public and private sectors. Although, as we have seen, the fiscal federalist solution considered in Chapters 4 and 5 also dramatically alters the equity–efficiency trade-off, it does not address the private sector efficiency trade-off since the bulk of taxes are assigned and we do not believe it offers sharp enough incentives for the public sector. Our fiscal autonomy proposal also provides a hard budget constraint, something which Barnett singularly fails to do, and although the fiscal federal solution also provides a harder constraint than Barnett it is not as hard as the fiscal autonomy outcome.

The key potential negative aspect of our fiscal autonomy proposal relates to the macroeconomic stabilization function of fiscal policy. In moving to a harder budget constraint, the Scottish Government's budgetary position will in part be determined by the capricious nature of the price of oil, and to a lesser extent the dollar exchange rate (since oil is priced in dollars), and it would be vitally important that an oil fund were set up to facilitate the smoothing of the price of oil. Additionally, some of the macroeconomic stabilization function currently held by Westminster should also be devolved (in order to address asymmetric shocks against the backdrop of a common currency) and if Scotland remains within the UK a stability pact would need to be agreed to underpin such a system; if Scotland became politically independent a formal stability pact would not be required although as long as the business cycle in Scotland was co-synchronous with the rest of the UK an informal stability pact would have to be adopted.

Any fiscal devolution proposal will clearly only work if the relevant institutional framework is in place, and what is especially important is that the Scottish polity respond positively to a new form of (hard) budget constraint, designed to ensure time consistent behaviour. Clearly, it is impossible to predict *ex ante* how the local polity will react to a changed fiscal environment. However, we do not regard this uncertainty as a

sufficient argument against addressing the important vertical fiscal imbalance that currently exists within the UK. The latter implies for the Scottish Parliament that it does not have sufficient power at its disposal to implant a core element of its business effectively.

In closing we must flag a potential practical, or political economy, issue relating to our fiscal autonomy proposal and that relates to the feasibility of Westminster and, perhaps particularly, Her Majesty's Treasury ceding the kind of fiscal powers we deem necessary for the Scottish Parliament. Discussions with many involved in the political fray have led us to conclude that the kind of powers we have argued for here will only come about if there is a credible vote for independence whenever a referendum on that may take place (and the SNP administration plan to have a referendum on this issue in 2010, but a credible threat could be made of course in the next general election if the SNP return their projected number of 30 MPs). Anything short of such a credible threat is likely to create a half-baked fiscal settlement for Holyrood which will doubtless perpetuate tensions between Holyrood and Westminster and not provide the appropriate incentives for the public and private sectors in Scotland.

In sum, we argue that the current fiscal settlement for Scotland is no longer politically tenable, nor is it defensible in terms of the economics of designing an appropriate fiscal settlement for Scotland. In terms of the latter, the current Barnett settlement offers essentially no route for the public and private sectors to be incentivized in terms of tax changes and it has at its core a soft budget constraint. The latter means that the public/private sector balance in Scotland is unlikely to be optimal. We therefore propose that some form of fiscal devolution must be introduced, and introduced soon, to address these issues and to enable the Scottish parliament to discharge its democratic function. We argue here, and in our previous work, that some of the advantages of fiscal devolution are available in a fiscal federal system. However, we believe that incentives for both politicians and the private sector are at their clearest under fiscal autonomy, a system of fiscal devolution which focuses on the devolution of a substantial proportion – perhaps all – of the tax base (rather than the assignment of a substantial proportion of taxes) and has at its heart a hard budget constraint.

NOTES

1. For example, see MacKay and Bell (2006); and McLean and McMillan (2002).
2. MacKay and Bell (2006).
3. On this see Kemp and Hallwood (1983).
4. Reported in the *Glasgow Herald*, 10 January 2008.

Glossary

Allocative efficiency: a combination of efficiency in production and efficiency in consumption. 'Efficiency in production' means that goods are produced at least possible cost. 'Efficiency in consumption' means that consumers are able to obtain the goods that they want in the combinations they prefer. Technically, allocative efficiency is achieved when for any pairs of goods the ratio of marginal cost is equal to the marginal rate of substitution (or ratio marginal utilities).

Assigned tax: taxes paid by and returned to the tax jurisdiction in which they were raised.

Benefit taxes: taxes that match benefits received by taxpayers. For example, residents of a local school district paying the full cost of its school system. Thus, residents 'pay for what they get'. See non-benefit taxes.

Bloc grant: the annual grant from Westminster to Edinburgh used to finance devolved expenditures.

Central government: the government of the UK based in Westminster.

CG: see central government.

Conditional grant: a grant from central government to sub-central government that is conditional on some action by the latter – very often to encourage sub-central government to spend money for a designated purpose, such as education. One purpose of conditional grants is to take account of spillover benefits from one tax jurisdiction to another. This is known as 'internalizing an externality'. As the spillover is a benefit not paid for by the receiving region, the sending region will tend to underinvest in it. The condition grant gets around this problem.

Devolved expenditure: expenditure classes devolved to Edinburgh under the Scotland Act (1999) – such as spending on Scottish health and education.

Devolved tax: a tax, such as income tax, over which sub-central government has some decision-making responsibility – such as setting the tax rate or the tax base.

Economies of scale occur when the average (or, per unit) cost of production falls with the size, or scale, of operations.

Equity or distributive justice occurs when the distribution of goods between people in a society is thought to be 'fair' by the electorate.

Fiscal autonomy: tax revenues raised in Scotland stay in Scotland and are used to finance spending by the Scottish government and parliament. At the highest level of fiscal autonomy no grants would flow to Scotland from the rest of the UK. If Scotland remains in the UK it would possibly have to pay the rest of the UK for public goods supplied by the latter (for example, defence, diplomatic services).

Fiscal equalization: see horizontal equity.

Fiscal federalism: in a strict legal sense fiscal federalism exists when a country's constitution grants rights to SCG over public spending and taxes. These powers cannot be removed by CG without an amendment of the constitution. Examples of such federal systems include the USA, Canada and Germany. In this sense the UK is not a federalism system, rather it is a unitary state. However, the term 'fiscal federalism' is widely used in a looser sense to describe situations where SCG has powers over spending and/or taxing that derives from CG that is not constitutionally protected. In this sense, Scotland is already part of a 'federal' system but with rather limited fiscal powers, especially over taxation.

Hard budget constraint: where the financial constraint on spending is binding – a SCG has to live within its means without expecting relief from CG.

Horizontal balance occurs when per head public expenditure is similar between regions at similar per head tax burdens. See also horizontal imbalance.

Horizontal equity what is judged to be 'fair' in taxing and spending between regions. See also fiscal equalization.

Horizontal imbalance: when per head regional tax burdens differ markedly for similar levels of per head public spending. Horizontal imbalance is

reduced if some tax revenue raised in high income regions is transferred to a low income region. See also horizontal balance.

Local public goods and services: their benefits are enjoyed within a restricted geographic area, for example, schools, hospitals, fire service.

Macroeconomic stabilization: see ‘stabilization function of government’.

Marginal tax rule: increased spending by the Scottish government in one area is matched by higher taxes to pay for it, and/or by lower spending elsewhere.

Matching grant: see conditional grant.

Moral Hazard: initially used in relation to the insurance industry. Somebody who is insured then acting differently once they are insured. For example, somebody with property insurance taking less care to secure their property.

Needs equalization: money transferred from central government to sub-central government on the basis of ‘need’ – usually to balance the per head supply of public goods at similar local tax burdens. Without needs equalization poorer regions would have a greater tax burden for the same supply of public goods.

Non-benefit taxes: taxes not necessarily related to benefits received from public spending in a region – such as taxes raised to redistribute income between high and low income households. See also benefit taxes.

Public choice theory: a branch of economics that views government as being run by self-interested agents. Thus, politicians and bureaucrats in acting in their own best interests do not necessarily act in the best interests of the electorate.

SCG: see sub-central government.

Soft budget constraint: when a SCG is aware that should it breach its spending or borrowing limits it can expect relief from CG.

Stabilization function of government: the use of the public finances to even out fluctuations in national production and employment. For example, in a recession increasing public spending and cutting taxes so as to stimulate the economy.

Sub-central government: a regional government, for example, the Scottish executive and parliament based in Edinburgh. See also central government and CG.

Tax assignment problem: determination of the ideal balance between taxes raised locally and total public expenditure in a region.

Time consistency: a commitment made today because it is rational to make it today that is still rational to execute when the time comes to do so. Thus, to constrain possible SCG overspending, CG commits to a ‘no bailout’ clause. The commitment is time consistent if SCG later threats default on its debts and it is still rational for CG to let it happen. If at this time of a threatened default it is not rational to let the default occur, the original commitment was not time consistent. Commitments that are known not to be time consistent are likely to be ineffective in governing behaviour.

Unconditional grant: a grant from CG a SCG that is not conditional on a predefined performance by the latter. See also conditional grant.

Vertical balance in the tax structure is the relationship between taxes raised in a region and a region’s public spending. High vertical imbalance means that taxes raised in a region cover only a small part of local public spending.

Vertical imbalance: see vertical balance.

West Lothian question: the member for West Lothian, Tam Dalyell, in 1977, questioned the sustainability of a devolved parliamentary system whereby Scottish MPs can vote on English only issues, but English MPs cannot vote on Scottish only matters.

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Index

Akai, N. 109
allocative efficiency and the private sector 113–15
Ashcroft, B. 83–4, 85, 88–90
assigned taxes 52, 61–6
Australia, fiscal decentralization 99
autonomous communities, Spain 110

balanced tax assignment 65–6
Baldwin, S. 24
Barnett, Lord 20
Barnett formula 4–6, 12
  administrative advantages 5–6
  and budget constraints 75–6, 84–5
  criticisms of 24, 83–6
Barrios, S. 119
Behnisch, A. 109
Belgium, sub-central government taxes 93–6
Bell, D. 9, 21, 75–6, 85, 106, 110
benefit rule 41
benefit units 41–2
Besedes, T. 118
bloc grant funding 3–6
  determination by Grants Commission 30–33
  and fiscal federalism 66–7
  modelling as non-cooperative game 25–30
borrowing
  Scotland 68
  sub-central governments 57, 100–102
Brennan/Buchanan hypotheses 112
Breuss, F. 111, 116
Brueckner, J.K. 47
budget constraints 43–5
  and Barnett formula 85–6
  fiscal autonomy 74–5, 88
  fiscal federalism 75–6, 87
budget deficit financing and Barnett formula 84–6

Buiter, W. 117
business cycle correlation and monetary union 119

Canada
  fiscal decentralization 99–100
  Representative Tax System 44
capital market integration and industrial specialization 120–21
Carrion-i-Silvestre, J. 110
central government control, SCG borrowing 101–2
China, fiscal decentralization and growth 108
Christie, A.C. 85
Clark, T.E. 119
collegiate administrative discipline, SCG borrowing 101
collusion, intergovernmental 44, 112
conditional grants 56
cooperative federalism 44
corporation tax 64–5, 77, 89
  and economic growth 113–15
Cupo payments, Spain 98
currency area and tax devolution 119–21
currency union with UK 117–21
customs and excise duties 54, 65, 78

Davoodi, H. 107
De Mello, L. 41, 47, 48
Dede, T. 108
democracy, effects of fiscal autonomy 72–3
democratic accountability and fiscal federalism 14
Denmark, sub-central government taxes 96
Desai, R.M. 109
Devine, T.M. 23
devolved taxes *see* taxes, devolution of

economic growth and fiscal devolution 45–7, 103–12, 113–16
and corporation tax 113–15
efficiency 7, 11
and equity 12–13, 39–40
and fiscal federalism 39–42
static 8–10
and tax competition 43–4
Eller, M. 111, 116
Engel, C.M. 119
equalization grants 56–7
equity 7
and efficiency 12–13, 39–40
and fiscal autonomy 88
EU countries, SCG revenues 92–6
expenditure
decentralization 104
Scotland 59–60

federal countries, fiscal decentralization 98–100
Feld, L.P. 108
Finlay, R.J. 25
fiscal autonomy 1, 6, 70–82, 123, 125–7
arguments for 21–3, 33–4
and bloc grant size 28–30
and budget constraints 74–5, 88
and democratic process 72
devolved taxes 77–8
and equity 88
and macroeconomic stabilization 78–80
proposed system 77–80, 125–7
Spanish regions 96–8, 102
fiscal devolution
economic case for 37–49
and economic growth 45–7, 103–12, 113–16
efficiency 41–2
equity and efficiency 39–40
EU countries 92–8
federal countries 98–100
macroeconomic stability 42
measurement 105–6, 111
and size of government 112–13
and social capital 47–9
fiscal federalism 1, 6, 10–15, 51–8
and budget constraints 75, 87
efficiency 40–42
equity and efficiency 39–40
macroeconomic stabilization 42
and Scotland 59–69, 123, 124–5
and social capital 48–9
fiscal mismatch *see* vertical imbalance
Fiva, J.H. 112
flypaper effect 43
Frankel, J.A. 118

Germany, fiscal decentralization and growth 109
Gil-Serrate, R. 110
Glick, R. 117, 118
Gordon, R.H. 113–14
Goschen formula 5, 24
government size and fiscal devolution 112–13
grants
intergovernmental 56–7, 112
see also bloc grant funding
Grants Commission and determination of bloc grant 30–33
Grossman, P.J. 112
growth *see* economic growth

Hallwood, P. 60
hard budget constraints 43–5, 72
headquarters effect 114
Heald, D. 5–6, 14, 52, 63
Heathcote, J. 120
horizontal imbalance 11–12
horizontal tax competition 43

incentive effects, fiscal autonomy 81, 88–90
income distribution 42
income tax 53–4, 63–4, 77
independence threat
effect of fiscal devolution 123–4
and size of bloc grant 23–8
India, fiscal decentralization and growth 109
industrial specialization and capital market integration 120–21
institutional requirements for decentralization 69
insurance function of central government 45
intergovernmental collusion 44, 112
intergovernmental grants 56–7, 112

internal stability pacts 79–80
interregional equity 12–13

Kalemli-Ozcan, S. 120
Kay, N. 5
Keefer, P. 47
Kirchgaessner, G. 113
Knack, S. 47
Kose, M.A. 120
Krugman, P. 67–8, 120

labour migration
  and currency area 119
  and tax devolution 64
Layard, R. 117
Lee, Y. 113–14
legitimacy of fiscal devolution 2, 21–2
Leviathan hypothesis 113
Levine-Renelt sensitivity test 111
Lin, J.Y. 108
Liu, Z. 108
local purchase taxes 54
Lopez-Laborda, J. 110

MacDonald, R. 60
MacKay, D.I. 9, 21, 75–6, 85, 106, 110
macroeconomic stabilization 7–8, 42, 67–8
  and fiscal autonomy 78–80
marginal spending decisions 66
marginal tax rule 63, 66
market discipline and SCG borrowing 101
matching grants 56
McCrone, G. 23, 74
McGregor, P.G. 85
McLean, I. 21, 23–4, 30, 31
McMillan, A. 23–4, 30, 85
Midwinter, A. 5
Miller, W.L. 25
monetary union with UK 117–21
moral hazard and budget constraints 43
Musgrave, P.B. 8
Musgrave, R.A. 8

natural resource taxes 54
natural resources ownership 40
  see also North Sea oil revenue
needs equalization 11–12, 53

no-bailout clause 44–5
non-benefit taxes 55
North Sea oil revenue 12, 13, 60, 78, 122

Oates, W.E. 29, 53, 103, 107
oil fund 13
oil prices, effect on tax revenues 86–7
  see also North Sea oil revenue

Perri, F. 120
Phillips, K. 107
private sector and allocative efficiency 113–15
property taxes 54
Prusa, T.J. 118
public goods provision, regional level 39–42
public opinion on fiscal autonomy 21–2
public sector, fiscal decentralization and growth 105–12

receipts, Scotland 60
Renelt, D. 111
Representative Tax System (RTS), Canada 44
risk-return trade-off 81
Rodden, J. 113
Rose, A.K. 117, 118, 119
rules based discipline, SCG borrowing 101
Russia, fiscal decentralization and growth 109

Sakata, M. 109
Sala-i-Martin, X. 111
secession threat
  effect of fiscal devolution 123–4
  and size of bloc grant 23–8
sensitivity analyses 111
Shadbegian, R.J. 112
size of government and fiscal devolution 112–13
Smith, A. 37
social capital and fiscal devolution 47–9
soft budget constraint
  Barnett formula 84–6
  and moral hazard 43

Spain
  fiscal decentralization and growth 110
  regional fiscal autonomy 96–8, 102
spending *see* expenditure
spillover effects of tax changes 88
stability pacts, internal 79–80
Stancke, M. 78
Stansel, D. 109
static efficiency 8–10
Steel Commission Report 71
sub-central governments (SCG) 92–8
  borrowing 100–102
  revenues, EU countries 92–6
Swales, K. 85
Switzerland, corporation tax 114

Tanzi, V. 69
tax assignment 53, 61–9
  balanced 65–6
tax base devolution 55
tax changes, incentive effects 88–90
tax competition and efficiency 43–4
tax devolution *see* fiscal devolution
tax revenue, effect of oil prices 86–7
taxes, devolution of 52–5, 62–5, 77–8
Thieβen, U. 107–8
Tiebout, C. 38, 41
time inconsistency 44–5
trade integration, effect of currency union 117–18
trade-off, efficiency and equity 12–13
Twigger, R. 5

unconditional grants 56
United States, fiscal decentralization 99
  and growth 109

value added tax 63, 77–8
van Wincoop, E. 119
vertical imbalance 11, 62
  and social capital 48–9
vertical tax structures 53
Voget, J. 115
voter support for Scottish fiscal autonomy 21–2

Wallis decentralization hypothesis 112
Watts, R.L. 44
Westminster, effect of fiscal devolution 13–15
Woller, G.M. 107

Xie, D. 109

Yilmaz, S. 107

ZEW IBC taxation index 115
Zhang, T. 108, 109
Zou, H. 107, 108, 109